

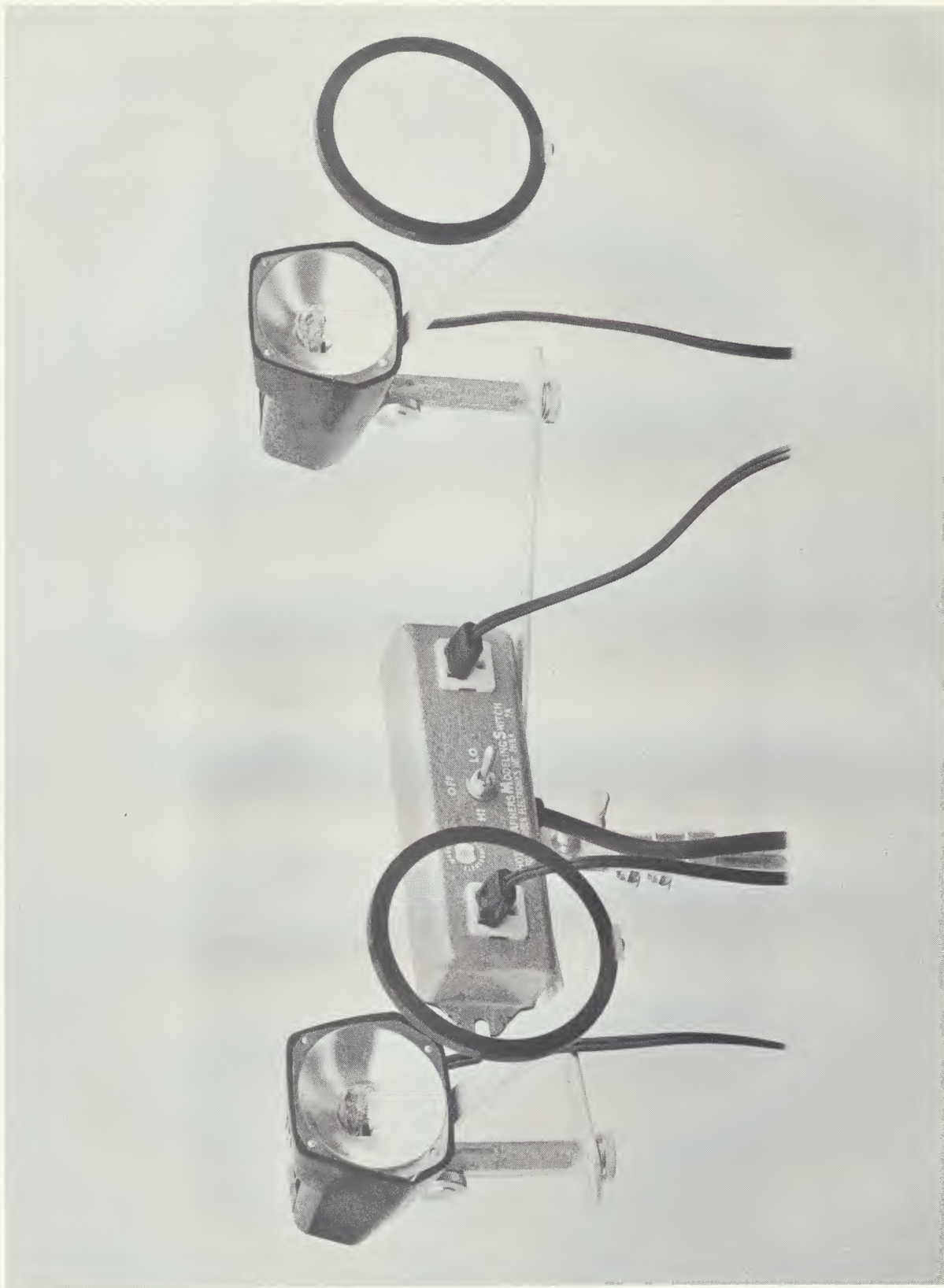


MODEL RLLi-1 LIGHTING UNIT FOR USE WITH HYCAM

A 1000 watt quartz iodine lamp, reflector and housing with adjustable stand. This photo shows a heat absorbing glass and bracket in front of the lamp. The heat absorbing glass decreases the light only  $1/4$  stop and decreases the heat by 85%. It puts out sufficient light to cover an area  $1-1/2$  ft. x 2 ft. and shoot Hycam at 6000 pictures per second with tri x neg. at f5.6.

Manufactured for RED LAKE LABORATORIES, INC. by Colortran.





#### MODEL RLLI-4 LIGHTING UNIT

Two 650 Watt Quartz Bromine Lamps with Heat Absorbing Glasses, Adjustable Stand and Brackets, Hi-Lo Switch and with Spot or Flood Adjustment. A small compact Lighting Unit especially designed for use with Hycam Cameras. Lamp life rated at 25 hours.

RED LAKE LABORATORIES, INC., Santa Clara, California



# Red Lake Labs

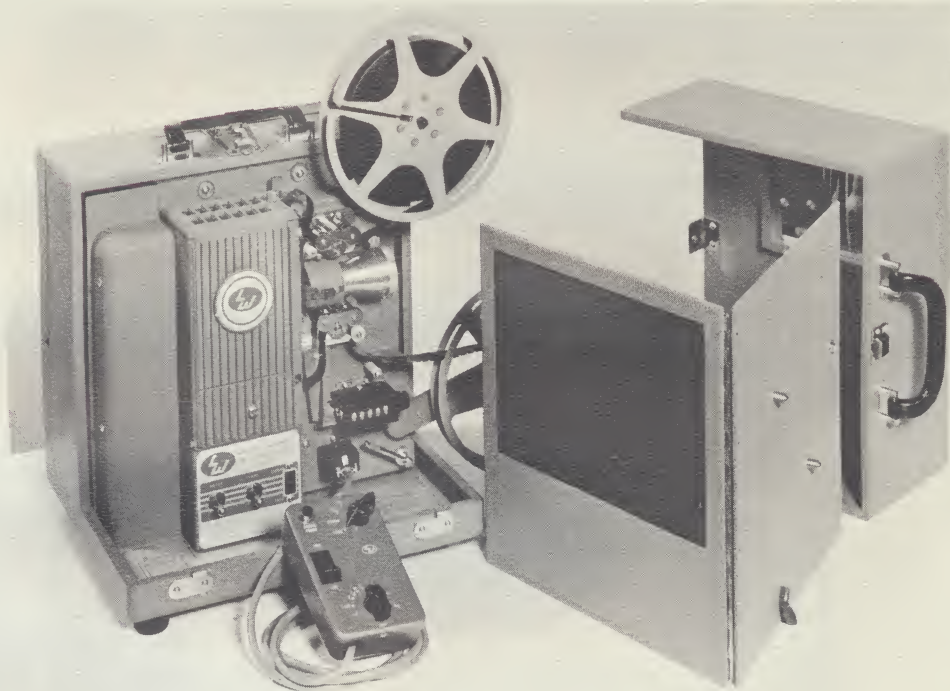
## $\frac{1}{2}$ FRAME 16mm STOP-ACTION PROJECTOR

### *Check these Important Features...*

- Variable speed 1 to 8 frames per second. Objectionable flicker removed
- Still picture without light loss or film damage
- Single frame by remote pushbutton control
- Normal 16 — 24 frame per second operation
- All speeds forward or reverse — instant change of direction
- Frame counter
- Remote control with calibrated speeds
- Built-in daylight viewing screen for desk-top viewing in lighted room

MODEL  
RLLW 900 $\frac{1}{2}$

OTHER FULL  
FRAME AND  
SOUND MODELS  
ALSO AVAILABLE



Manufactured by:

L-W PHOTO, INC.  
Van Nuys, California 91406

Handy BUILT-IN DAYLIGHT VIEWING SCREEN permits study and analysis of films right at your desk. Bright, clear pictures — even in normally lighted room AND without objectionable flicker.

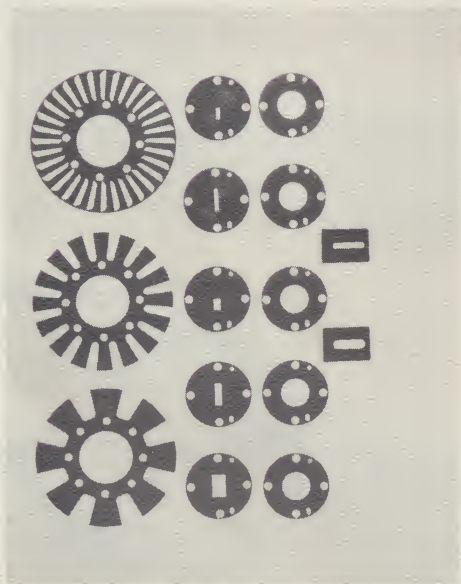
NOTE: ACCEPTS 16 mm FILM WITH 8 mm PERFORATIONS ONLY.

AN EXCLUSIVE  
PRODUCT OF:

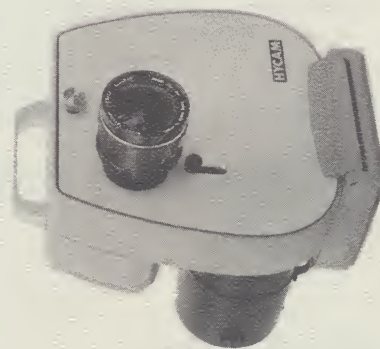
*Red Lake Labs, Inc.*  
PHOTO INSTRUMENTATION EQUIPMENT

*Products the User Likes*

2971 CORVIN DRIVE  
KIFER INDUSTRIAL PARK  
SANTA CLARA, CALIFORNIA 95051  
(408) — 739-3034



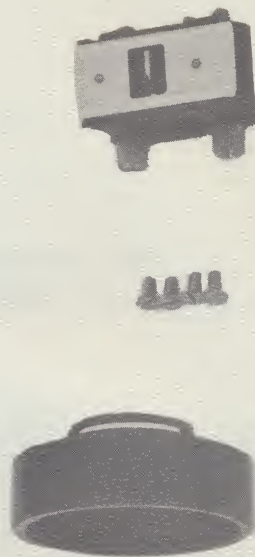
HYCAM Shutters, Masks, and Reticles



Oscillo Lens Attachment for Use on  
100' HYCAMS Model K20SA-1P



Bellow Extension Model RLLBXT-1



Lower Gate and Streak Attachment  
Model K25A-1  
Oscillo Attachment, Model K20SA-4P



# Red Lake Labs

## LOCAM

MODEL  
162-2

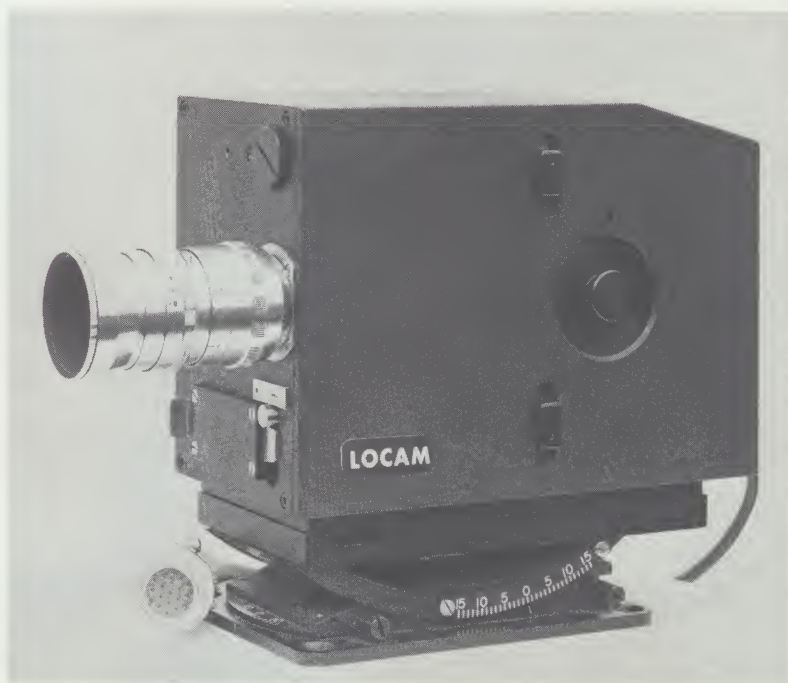
### INTERMITTENT PIN-REGISTERED 16-mm high-speed motion-picture camera

- \* 16-mm by 200-ft film capacity (other models to 400-ft)
- \* Speed Range, up to 200 pictures per second (other models up to 500 pps)
- \* Low electrical current requirement
- \* Designed with interchangeable modular sub-assemblies for troublefree service and easy maintenance
- \* Prelubricated for camera lifetime
- \* Lightweight, compact, and built to meet all environmental rigors of aerospace operation
- \* Through-the-lens viewing and focusing

The Model 162-2 Red Lake Locam is basically a 28-v d-c camera with a running current of 3 amp, or a 115-v a-c optional model. It is specifically designed for on-board and support applications such as aeronautical flight testing, weapon deployment, and strike documentation; missile stage separation, umbilical disconnect, and rocket-motor burnout.

Accommodating 200 feet of standard 16-mm film, the Locam Model 162-2 has a frame rate range up to 200 pictures per second. One of four discrete frame rates can be chosen and controlled within 1½ per cent at 200 pps by a built-in solid-state electronic speed regulator.

*A High-Quality Precision Aerospace  
Camera for Tactical and Research  
Applications*



more ➤



*continued*

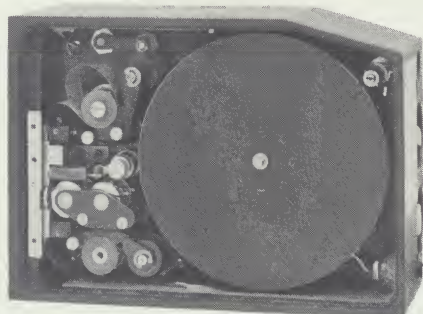
# LOCAM MODEL 162-2

The film-transport assembly, easily replaceable, is a dynamically balanced two-claw intermittent movement with double-pin registration. Register pins and pulldown claws maintain continuous control of the film while it is in the gate.

Environmentally, the camera operates from  $-65$  to  $+130$  deg F, with an accessory heater, in atmospheres up to 95 per cent humidity, at altitudes up to 60,000 ft, and under stresses of 10 g (or higher if specially required) in both directions of the X, Y, and Z axes.

Throughout, the camera is designed for maximum troublefree service and is designed to permit interchangeability of subassemblies and easy access to all parts for the fastest, easiest maintenance.

Other features of the Model 162-2 Locam include: C-type lens mount, automatic power cutoff at the end of film, a displacement-type film-footage indicator, and a single-piece cast-aluminum body with integral mid-partition and a black smooth-textured gloss-epoxy finish.



## OTHER RED LAKE PRODUCTS:

Hycam 16-mm Rotating-Prism Motion-Picture Cameras, 10 to 44,000 pps up to 2000-ft film capacity. Other Locam Intermittent Pin-Registered Cameras with larger film capacities and higher frame rates.

## TECHNICAL DATA

**FILM:** 16-mm by 200 ft. Standard camera set for long pitch 0.3000-in. unless otherwise specified.

**APERTURE:** ASA standard 0.292 x 0.402-in. Gate removable for cleaning and maintenance.

**FRAME RATES:** Selectable 25, 50, 100, 200 pps electronically regulated  $\pm 1\frac{1}{2}\%$  at 200 pps.

**OPERATION:** Start-stop at all speeds, acceleration to 200 pps in 0.5 second.

**FILM TRANSPORT:** Full-time-captive dynamically balanced two-claw intermittent movement with double-pin registration. Frame-to-frame registration  $\pm 0.0002$ .

**SHUTTER:** Standard, one-piece rotary-disk double-segmented 60-degree. Rotation, one-half revolution per frame—equivalent to 120-degree single segmented shutter. (Other types available)

**LENSES:** All standard 16-mm C-mount. Flange focal distance 0.690-in. (ASA)

**BORESIGHT:** Alignment and focusing attachment, for use through the aperture, is supplied as standard equipment.

**FILM RUNOUT:** Automatic cutoff switch.

**ELECTRICAL DATA:** 28-v d-c, running current

3 amp (115-v a-c model available). 18-in. cable with MS 3137P-19P connector, others special.

**FILM FOOTAGE INDICATOR:** Displacement type, senses diameter of film on supply spool.

**MOUNTING:**  $\frac{3}{8}$ -16 tripod insert top and bottom. Dovetail baseplate compatible with RLWM-1 adjustable elevation and azimuth mount.

**ENVIRONMENTAL DATA:** With accessory heater,  $-65$  to  $+130$  deg F, 95% humidity, altitudes to 60,000-ft, acceleration to 10 g (or higher if required) in both directions of X, Y, Z axes.

**CONSTRUCTION:** Single-piece cast-aluminum body with integral mid-partition. Black smooth-textured gloss-epoxy finish standard, other colors on special order.

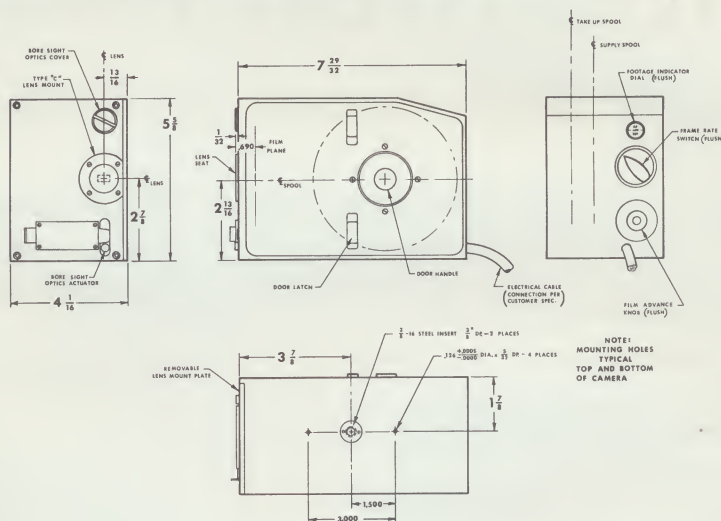
**LUBRICATION:** Prelubricated for life of camera.

**WEIGHT:** 8 lb without lens and film.

## ACCESSORIES:

Built-in boresight device provides through-the-lens reflex viewing without removing film. Gives full-frame viewing at low magnification and critical focusing at high magnification.

Other Accessories: Interchangeable shutters—5 to 160 deg segmented, quick-release camera mount, remote speed control, timing lights, carrying case, heater, and tool kit.



## FULLY GUARANTEED

90-day guarantee: If, for any reason, you are not completely satisfied with any Red Lake product within 90 days, you may return it for full credit.

One-year warranty covers any defect in workmanship or material.

If desired, Red Lake equipment can be rented with advantageous rental credits against ultimate purchase. Ask about our 10-day free-trial plan.

# Red Lake Laboratories, Inc.

PHOTO INSTRUMENTATION EQUIPMENT

Products the User Likes

2971 CORVIN DRIVE  
KIFER INDUSTRIAL PARK  
SANTA CLARA, CALIFORNIA 95051  
TELEPHONE (408)-739-3034  
TWX 910-339-9241



# Red Lake Labs



## TIMING LIGHT GENERATORS

Red Lake MilliMite and MicroMilliMite Timing Light Generators produce accurately calibrated electrical pulse outputs at 10, 100, and 1,000 cycles per second for the specific purpose of triggering neon glow lamps for putting timing marks on films produced in high-speed or other roll-film cameras. The units are usable with any moving-film cameras having a compatible timing-lamp assembly.

While the outputs of the two models available are essentially identical, the MicroMilliMite, illustrated on the next page (Model MMTLG-2B), is designed to withstand the rigors of airborne or rocket-sled-borne operation. Its physical design is therefore very sturdy and its operation is from a nominal 28-v d-c power source.

The MilliMite, illustrated above (Model TLG-3) has proved itself as a unit that gives accuracy well within the working range of the technical requirements of normal high-speed photography at a cost less than half as much as that of otherwise competitive instruments.

Both models have solid-state components and externally selectable pulse rates. The MicroMilliMite has all components epoxied to the best-quality circuit board avail-

Model TLG-3 Red Lake MilliMite Timing Light Generator provides self-contained battery operation. With replacement of power supply for internal battery, unit becomes Model TLG-3DC for operation from standard 115-v power.

able, yet the components can be easily removed for servicing. The MilliMite has in addition a battery-check circuit with an indicating voltmeter. Use of a Zener diode automatically compensates for the voltage drop of an aging battery.

Simple removal of four screws and an electrical plug permits interchange of the 45-volt internal battery of the MilliMite with a corresponding 115-v a-c power supply and power cord, making the unit extremely versatile as to application.

### FEATURES:

- *Designed for application—two models cover normal and rugged-service needs*
- *Solid-state components for reliability, compactness, and low power consumption*
- *Light—MilliMite, four pounds with battery; Micro-MilliMite, only one pound*
- *Versatile—three pulse rates cover all normal film speeds. MicroMilliMite for 28-v d-c operation; MilliMite either internal battery (45-v) or 115-v a-c.*

more ➤



*continued*

## TIMING LIGHT GENERATORS

### SPECIFICATIONS

Pulse Rates, externally selectable, cps

Pulse Widths,  $\mu$ sec

Pulse Amplitudes, volts

Pulse-Rate Accuracy, at 75 F, per cent  
(overall, -20 to +165 F, accuracy  $\pm 1.0$  per cent)

Pulse-Rate Adjustment

Pulse-Rate Monitor

Operating Power

Compensation for input voltage and  
ambient temperature variations

Dimensions, inches

Weight, pounds

#### MilliMite

10, 100, 1,000  
(other frequencies on special order)

150, 150, 50

900, 900, 700

0.2

Internal, screwdriver

Neon panel lamp

Internal battery or  
115-v 50/60 cps a-c

Transistors and  
zener diode

5 by 6 by 7

4

#### MicroMilliMite

10, 100, 1,000

150, 150, 50

700, 700, 700

0.2

Internal, screwdriver

Neon panel lamp

External 28-v d-c  
(operable 17 to 35-v d-c)

Transistors and  
zener diode

1½ by 4 by 5

1

Rugged design and construction fit the Model MMTLG-2B Red Lake MicroMilliMite Timing Light Generator for the most adverse environmental applications. Externally selectable pulse rates are 10, 100, and 1,000 cycles per second; weight is only 16 ounces.



# Red Lake Labs, Inc.

PHOTO INSTRUMENTATION EQUIPMENT

*Products the User Likes*

2971 CORVIN DRIVE

KIFER INDUSTRIAL PARK

SANTA CLARA, CALIFORNIA 95051

(408) 739-1698



# RED LAKE LABORATORIES, INC.

2971 CORVIN DRIVE - SANTA CLARA, CALIFORNIA 95051  
(Area Code 408) 739-3034 TWX: 910-339-9241

## SPECIFICATION AND PRICE LIST

HYCAM is currently produced in three basic models, the 100, 400, and 2000 Ft. film capacity cameras.

All HYCAM Models use 16mm film.

A choice of five frame formats are available:

- 1 - Full Frame 16mm
- 2 - Half Frame 16mm
- 3 - True 8mm (can use 16mm film, perforated for 8mm)
- 4 - Quarter Frame 16mm
- 5 - Half Frame 8mm

The 100 Ft. and 400 Ft. models are available with or without a speed reducer.

The 2000 Ft. models are all equipped with speed reducers.

Model number coding indicates the following features:

|                                         |    |   |   |                                      |
|-----------------------------------------|----|---|---|--------------------------------------|
| K2                                      | 00 | 4 | A | E                                    |
| HYCAM SERIES                            |    |   |   | ELECTRONIC SPEED CONTROL             |
|                                         |    |   |   | E=Speed Control                      |
| SPEED REDUCER MODELS                    |    |   |   | R=Rectifier                          |
| 00=Non Speed Reducer                    |    |   |   | (Non Speed Control Model)            |
| OS=Speed Reducer 100 Ft.<br>and 400 Ft. |    |   |   |                                      |
| S=Speed Reducer 2000 Ft.                |    |   |   | FRAME FORMAT                         |
| FILM CAPACITY                           |    |   |   | A=1/2 Frame 16mm or True 8mm         |
| 1=100 Ft. Capacity                      |    |   |   | B=1/4 Frame 16mm or 1/2 Frame<br>8mm |
| 4=400 Ft. Capacity                      |    |   |   | Omit for Standard 16mm Format        |
| 20=2000 Ft. Capacity                    |    |   |   |                                      |

\*\*\*\*\*

HYCAM Features HEA, a special high efficiency antireflection optical coating which transmits almost all the visible spectrum and consequently greatly enhances both black and white and color film.

Specifications and prices are available upon request for 400 Ft. capacity HYCAMs without built-in speed controls, for applications requiring only maximum frame rates.

Prices and specifications subject to change without notice.



# CAMERA, 16mm x 100 Ft. CAPACITY

## K2001R

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, Full Frame 16mm x 100 Ft. capacity; 100 to 9000 pictures per second; complete with event synchronizer; built in rectifier; cut-off switch; 1/2.5 shutter; single timing light assembly; takes "C" mount lenses of any focal length; has 8 sided prism, sprocket and shutter on one shaft; with power cord, event synchronizer cord and timing light connector. Resolution: Center, 68 lines/mm Vertical and horizontal. Edges, 56 lines/mm vertical and horizontal.

Wt. 14 lbs. \$1,395.00

## K2001AR

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/2 Frame 16mm or 8mm x 100 Ft. capacity; 200 to 18,000 pictures per second; complete with event synchronizer; built in rectifier; cut-off switch; 1/2.5 shutter; single timing light assembly; take "C" mount lenses of any focal length; has 16 sided prism, sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/2 frame 16mm and one to obtain true 8mm; with power cord, event synchronizer cord and timing light connector. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal.

Wt. 14 lbs. \$1,545.00

## K2001BR

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/4 Frame 16mm or 1/2 frame 8mm x 100 Ft. capacity; 400 to 36,000 pictures per second; complete with event synchronizer; built in rectifier; cut-off switch; 1/2.5 shutter; single timing light assembly; takes "C" mount lenses of any focal length; has 32 sided prism, sprocket, and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/4 frame 16mm and one to obtain 1/2 frame 8mm; with power cord, event synchronizer cord, and timing light connector. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal.

Wt. 14 lbs. \$2,345.00

RED LAKE LABS., INC.



## CAMERA, 16mm x 100Ft. CAPACITY

### K20S1R

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, Full frame 16mm x 100 Ft. capacity; 10 to 9000 pictures per second; complete with event synchronizer; built-in rectifier; cut-off switch; 1/2.5 shutter; single timing light assembly; speed reducer; takes "C" mount lenses of any focal length; has 8 sided prism, sprocket and shutter on one shaft; with power cord, event synchronizer cord and timing light connector. Resolution: Center, 68 lines/mm vertical and horizontal. Edges, 56 lines/mm vertical and horizontal.

Wt. 15 lbs.

\$1,545.00

### K20S1AR

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/2 frame 16mm or 8mm x 100 Ft. capacity; 20 to 18,000 pictures per second; complete with event synchronizer; built-in rectifier; cut-off switch; 1/2.5 shutter; single timing light assembly; speed reducer; takes "C" mount lenses of any focal length; has 16 sided prism, sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/2 frame 16mm and one to obtain true 8mm; with power cord, event synchronizer cord and timing light connector. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal.

Wt. 15 lbs.

\$1,695.00

### K20S1BR

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/4 frame 16mm or 1/2 frame 8mm x 100 Ft. capacity; 40 to 36,000 pictures per second; complete with event synchronizer; built-in rectifier; cut-off switch; 1/2.5 shutter; single timing light assembly; speed reducer; takes "C" mount lenses of any focal length; has 32 sided prism, sprocket, and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/4 frame 16mm and one to obtain 1/2 frame 8mm; with power cord, event synchronizer cord and timing light connector. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal.

Wt. 15 lbs.

\$2,495.00

RED LAKE LABS., INC.



## CAMERA, 16mm x 100Ft. CAPACITY

### K20S1E-115

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, Full frame 16mm x 100 Ft. capacity; 10 to 9000 pictures per second; 115V., A.C., 50/60 cycle input to motor with electronic (SCR) speed control for 1% frame rate regulation after acceleration from 10 to 3000 pictures per second; (Above 3000 PPS use variable auto-transformer) complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; speed reducer; takes "C" mount lenses of any focal length; has 8 sided prism, sprocket, and shutter on one shaft; with power cord, event synchronizer cord, and timing light connectors. Resolution: Center, 68 lines/mm vertical and horizontal. Edges, 56 lines/mm vertical and horizontal. Wt. 15 lbs. Control Unit 5 lbs. \$2,155.00

### K20S1AE-115

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/2 Frame 16mm or 8mm x 100 Ft. capacity; 20 to 18,000 pictures per second; 115V., A.C., 50/60 cycle input to motor with electronic (SCR) speed control for 1% frame rate regulation after acceleration from 20 to 6,000 pictures per second; (Above 6000 PPS use variable auto-transformer) complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; speed reducer; takes "C" mount lenses of any focal length; has 16 sided prism, sprocket, and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/2 frame 16mm and one to obtain true 8mm; with power cord, event synchronizer cord, and timing light connectors. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal. Wt. 15 lbs. Control Unit 5 lbs. \$2,305.00

### K20S1BE-115

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/4 Frame 16mm or 1/2 frame 8mm x 100 Ft. capacity; 40 to 36,000 pictures per second; 115V., A.C., 50/60 cycle input to motor with electronic (SCR) speed control for 1% frame rate regulation after acceleration from 40 to 12,000 pictures per second; (Above 12,000 PPS use variable auto-transformer) complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; speed reducer; takes "C" mount lenses of any focal length; has 32 sided prism, sprocket, and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/4 frame 16mm and one to obtain 1/2 frame 8mm; with power cord, event synchronizer cord, and timing light connectors. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal. Wt. 15 lbs. Control Unit 5 lbs. \$3,105.00

RED LAKE LABS., INC.



## CAMERA, 16mm x 100 Ft. CAPACITY

### K20S1E-230

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, Full frame 16mm x 100 Ft. capacity: 10 to 9000 pictures per second; 230V., A.C., 50/60 cycle input to motor with electronic (SCR) speed control for 1% frame rate regulation after acceleration from 10 to 3000 pictures per second; (Above 3000 PPS use variable auto-transformer) complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; speed reducer; takes "C" mount lenses of any focal length; has 8 sided prism, sprocket, and shutter on one shaft; with power cord, event synchronizer cord, and timing light connectors. Resolution: Center, 68 lines/mm vertical and horizontal. Edges, 56 lines/mm vertical and horizontal. Wt. 15 lbs. Control Unit 5 lbs. \$2,205.00

### K20S1AE-230

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/2 frame 16mm or 8mm x 100 Ft. capacity; 20 to 18,000 pictures per second, 230V., A.C., 50/60 cycle input to motor with electronic (SCR) speed control for 1% frame rate regulation after acceleration from 20 to 6,000 pictures per second; (Above 6,000 PPS use variable auto-transformer) complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; speed reducer; takes "C" mount lenses of any focal length; has 16 sided prism, sprocket, and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/2 frame 16mm and one to obtain true 8mm; with power cord, event synchronizer cord, and timing light connectors. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal.

Wt. 15 lbs. Control Unit 5 lbs. \$2,355.00

### K20S1BE-230

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/4 frame 16mm or 1/2 frame 8mm x 100 Ft. capacity; 40 to 36,000 pictures per second; 230V., A.C., 50/60 cycle input to motor with electronic (SCR) speed control for 1% frame rate regulation after acceleration from 40 to 12,000 pictures per second; (Above 12,000 PPS use variable auto-transformer) complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; speed reducer; takes "C" mount lenses of any focal length; has 32 sided prism, sprocket, and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/4 frame 16mm and one to obtain 1/2 frame 8mm; with power cord, event synchronizer, and timing light connectors. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal.

Wt. 15 lbs. Control Unit 5 lbs. \$3,105.00

RED LAKE LABS., INC.



## CAMERA, 16mm x 400 Ft. CAPACITY

### K2004E-115

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, Full Frame 16mm x 400 Ft. capacity; 115V., A.C., 50/60 cycle input to motor. Frame rate variable from 100 to 11,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed); with electronic (SCR) speed control for 1% frame rate regulation after acceleration from 100 to 5000 pictures per second; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; takes "C" mount lenses of any focal length; has 8 sided prism, sprocket and shutter on one shaft; with power cord, remote control cord, event synchronizer cord and connectors. Resolution: Center, 68 lines/mm vertical and horizontal. Edges, 56 lines/mm vertical and horizontal. Wt. 30 lbs. \$2,970.00

### K2004AE-115

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/2 Frame 16mm or 8mm x 400 Ft. capacity; 115V., A.C., 50/60 cycle input to motor. Frame rate variable from 200 to 22,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed); with electronic (SCR) speed control for 1% frame rate regulation after acceleration from 20 to 10,000 pictures per second; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; takes "C" mount lenses of any focal length; has 16 sided prism, sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/2 frame 16mm and one to obtain true 8mm; with power cord, remote control cord, event synchronizer cord and connectors. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal. Wt. 30 lbs. \$3,120.00

### K2004BE-115

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/4 Frame 16mm or 1/2 frame 8mm x 400 Ft. capacity; 115V., A.C., 50/60 cycle input to motor. Frame rate variable from 400 to 44,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed); with electronic (SCR) speed control for 1% frame rate regulation after acceleration from 400 to 20,000 pictures per second; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; takes "C" mount lenses of any focal length; has 32 sided prism, sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/4 frame 16mm and one to obtain 1/2 frame 8mm; with power cord, remote control cord, event synchronizer cord and connectors. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal. Wt. 30 lbs. \$3,920.00

RED LAKE LABS., INC.



## CAMERA, 16mm x 400ft. CAPACITY

### K20S4E-115

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, Full Frame 16mm x 400 Ft. capacity; 115V., A.C., 50/60 cycle input to motor. Frame rate variable from 10 to 11,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed); with electronic (SCR) speed control for 1% frame rate regulation after acceleration from 10 to 5000 pictures per second; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; speed reducer; takes "C" mount lenses of any focal length; has 8-sided prism, sprocket and shutter on one shaft; with power cord, remote control cord, event synchronizer cord and connectors. Resolution: Center, 68 lines/mm vertical and horizontal. Edges, 56 lines/mm vertical and horizontal.

Wt. 32 lbs. \$3,220.00

### K20S4AE-115

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/2 Frame 16mm or 8mm x 400 ft. capacity; 115V., A.C., 50/60 cycle input to motor. Frame rate variable from 20 to 22,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed); with electronic (SCR) speed control for 1% frame rate regulation after acceleration from 20 to 10,000 pictures per second; complete with event synchronizer; cut off switch; 1/2.5 shutter; double timing light assembly; film footage counter; speed reducer; takes "C" mount lenses of any focal length; has 16-sided prism, sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/2 frame 16mm and one to obtain true 8mm; with power cord, remote control cord, event synchronizer cord and connectors. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal.

Wt. 32 lbs. \$3,370.00

### K20S4BE-115

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/4 Frame 16mm or 1/2 Frame 8mm x 400 ft. capacity, 115V., A.C., 50/60 cycle input to motor. Frame rate variable from 40 to 44,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed); with electronic (SCR) speed control for 1% frame rate regulation after acceleration from 40 to 20,000 pictures per second; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; speed reducer; takes "C" mount lenses of any focal length; has 32-sided prism; sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/4 frame 16mm and one to obtain 1/2 frame 8mm; with power cord, remote control cord, event synchronizer cord and connectors. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal.

Wt. 32 lbs. \$4,170.00

RED LAKE LABS., INC.



## CAMERA, 16mm X 400 Ft. CAPACITY

- K2004E-230 HYCAM, HIGH SPEED MOTION PICTURE CAMERA, Full frame 16mm x 400 Ft. capacity; 230V., A.C., 50/60 cycle input to motor. Frame rate variable from 100 to 11,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed) With electronic (SCR) speed control for 1% frame rate regulation after acceleration from 100 to 5000 pictures per second; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; takes "C" mount lenses of any focal length; has 8 sided prism, sprocket and shutter on one shaft; with power cord, remote control cord, event synchronizer cord and connectors. Resolution: Center, 68 lines/mm vertical and horizontal. Edges, 56 lines/mm vertical and horizontal.
- Wt. 30 lbs. \$3,045.00
- K2004AE-230 HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/2 frame 16mm or 8mm x 400 ft. capacity; 230V., A.C., 50/60 cycle input to motor. Frame rate variable from 200 to 22,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed) With electronic (SCR) speed control for 1% frame rate regulation after acceleration from 200 to 10,000 pictures per second; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; takes "C" mount lenses of any focal length; has 16 sided prism, sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/2 frame 16mm, and one to obtain true 8mm; with power cord, remote control cord, event synchronizer cord and connectors, Resolution: Center, 80 lines/mm vertical and horizontal. Edges 68 lines/mm vertical and horizontal.
- Wt. 30 lbs. \$3,195.00
- K2004BE-230 HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/4 frame 16mm or 1/2 frame 8mm x 400 ft. capacity; 230V., A.C., 50/60 cycle input to motor. Frame rate variable from 400 to 44,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed) With electronic (SCR) speed control for 1% frame rate regulation after acceleration from 400 to 20,000 pictures per second; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; takes "C" mount lenses of any focal length; has 32 sided prism, sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/4 frame 16mm and one to obtain 1/2 frame 8mm; with power cord, remote control cord, event synchronizer cord and connectors. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal.
- Wt. 30 lbs. \$3,995.00

RED LAKE LABS., INC.



## CAMERA, 16mm x 400ft. CAPACITY

### K20S4E-115

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, Full Frame 16mm x 400 Ft. capacity; 115V., A.C., 50/60 cycle input to motor. Frame rate variable from 10 to 11,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed); with electronic (SCR) speed control for 1% frame rate regulation after acceleration from 10 to 5000 pictures per second; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; speed reducer; takes "C" mount lenses of any focal length; has 8-sided prism, sprocket and shutter on one shaft; with power cord, remote control cord, event synchronizer cord and connectors. Resolution: Center, 68 lines/mm vertical and horizontal. Edges, 56 lines/mm vertical and horizontal.

Wt. 32 lbs. \$3,220.00

### K20S4AE-115

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/2 Frame 16mm or 8mm x 400 ft. capacity; 115V., A.C., 50/60 cycle input to motor. Frame rate variable from 20 to 22,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed); with electronic (SCR) speed control for 1% frame rate regulation after acceleration from 20 to 10,000 pictures per second; complete with event synchronizer; cut off switch; 1/2.5 shutter; double timing light assembly; film footage counter; speed reducer; takes "C" mount lenses of any focal length; has 16-sided prism, sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/2 frame 16mm and one to obtain true 8mm; with power cord, remote control cord, event synchronizer cord and connectors. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal.

Wt. 32 lbs. \$3,370.00

### K20S4BE-115

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/4 Frame 16mm or 1/2 Frame 8mm x 400 ft. capacity, 115V., A.C., 50/60 cycle input to motor. Frame rate variable from 40 to 44,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed); with electronic (SCR) speed control for 1% frame rate regulation after acceleration from 40 to 20,000 pictures per second; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; speed reducer; takes "C" mount lenses of any focal length; has 32-sided prism; sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/4 frame 16mm and one to obtain 1/2 frame 8mm; with power cord, remote control cord, event synchronizer cord and connectors. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal.

Wt. 32 lbs. \$4,170.00

RED LAKE LABS., INC.



## CAMERA, 16mm x 400 Ft. CAPACITY

### K20S4E-230

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, Full Frame 16mm x 400 Ft. capacity; 230V., A.C., 50/60 cycle input to motor. Frame rate variable from 10 to 11,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed) with electronic (SCR) speed control for 1% frame rate regulation after acceleration from 10 to 5000 pictures per second; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; speed reducer; takes "C" mount lenses of any focal length; with power cord, remote control cord, event synchronizer cord and connectors. Resolution: Center, 68 lines/mm vertical and horizontal. Edges, 56 lines/mm vertical and horizontal.

Wt. 32 lbs. \$3,295.00

### K20S4AE-230

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/2 frame 16mm or 8mm x 400 Ft. capacity; 230V., A.C., 50/60 cycle input to motor. Frame rate variable from 20 to 22,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed); with electronic (SCR) speed control for 1% frame rate regulation after acceleration from 20 to 10,000 pictures per second; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; speed reducer; takes "C" mount lenses of any focal length; has 16 sided prism, sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/2 frame 16mm and one to obtain true 8mm; with power cord, remote control cord, event synchronizer cord and connectors. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal.

Wt. 32 lbs. \$3,445.00

### K20S4BE-230

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/4 frame 16mm or 1/2 frame 8mm x 400 Ft. capacity; 230V., A.C., 50/60 cycle input to motor. Frame rate variable from 40 to 44,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed); with electronic (SCR) speed control for 1% frame rate regulation after acceleration from 40 to 20,000 pictures per second; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; speed reducer; takes "C" mount lenses of any focal length; has 32 sided prism, sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/4 frame 16mm and one to obtain 1/2 frame 8mm; with power cord, remote control cord, event synchronizer cord and connectors. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal.

Wt. 32 lbs. \$4,245.00

RED LAKE LABS., INC.



## CAMERAS, 16 mm X 2000 Ft. CAPACITY

### K2S20E-115

HYCAM HIGH SPEED MOTION PICTURE CAMERA, Full Frame 16mm X 2000 Ft. capacity; 115V., A. C. 50/60 cycle input to motor, frame rate variable for 100 to 5000 pictures per second by use of built-in potentiometer. (No auto-transformer needed) with electronic (SCR) speed control for 1% frame rate regulation after acceleration; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; speed reducer; takes "C" mount lenses of any focal length; has 8 sided prism, sprocket and shutter on one shaft; with two Dark Room Loading, daylight handling Film Cassettes: power cord, remote control cord, event synchronizer cord, and connectors Resolution : Center, 68 lines/mm vertical and horizontal. Edges 56 lines/mm vertical and horizontal.

Wt. 82 lbs.

\$8,300.00

### K2S20AE-115

HYCAM HIGH SPEED MOTION PICTURE CAMERA, 1/2 frame 16mm or 8mm X 2000 Ft. capacity; 115V., A.C., 50/60 cycle input to motor, frame rate variable from 200 to 10,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed) with electronic (SCR) speed control for 1% frame rate regulation after acceleration; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; speed reducer; takes "C" mount lenses of any focal length; has 16 sided prism, sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/2 frame 16mm and one to obtain true 8mm; with two Dark Room Loading, daylight handling Film Cassettes; power cord, remote control cord, event synchronizer cord and connectors, Resolution: Center 80 lines/mm vertical and horizontal. Edges 68 lines/mm vertical and horizontal.

Wt. 82 lbs.

\$8,450.00

### K2S20BE-115

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/4 Frame 16mm or 1/2 8mm X 2000 Ft. capacity; 115V., A. C., 50/60 cycle input to motor. Frame rate variable from 400 to 20,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed) with electronic (SCR) speed control for 1% frame rate regulation after acceleration; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; speed reducer; takes "C" mount lenses of any focal length; has 32 sided prism, sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/4 frame 16mm and one to obtain 1/2 frame 8mm; with two Dark Room Loading, daylight handling Film Cassettes; power cord, remote control cord, event synchronizer cord and connectors. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal.

Wt. 82 lbs.

\$9,250.00

RED LAKE LABS., INC.



## CAMERAS, 16 mm x 2000 Ft. CAPACITY

### K2S20E-230

HYCAM HIGH SPEED MOTION PICTURE CAMERA, Full Frame 16mm x 2000 Ft. capacity; 230V., A. C. 50/60 cycle input to motor. 100 to 5000 pictures per second by use of built-in potentiometer. (No auto-transformer needed) with electronic (SCR) speed control for 1% frame rate regulation after acceleration; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; speed reducer; takes "C" mount lenses of any focal length; has 8 sided prism, sprocket and shutter on one shaft; with two Dark Room Loading, daylight handling Film Cassettes; power cord, remote control cord, event synchronizer cord and connectors. Resolution: Center, 68 lines/mm vertical and horizontal. Edges 56 lines/mm vertical and horizontal.

Wt. 82 lbs.      \$8,300.00

### K2S20AE-230

HYCAM HIGH SPEED MOTION PICTURE CAMERA, 1/2 Frame 16mm or 8mm x 2000 Ft. capacity; 230V., A. C. 50/60 cycle input to motor. Frame rate variable from 200 to 10,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed) with electronic (SCR) speed control for 1% frame rate regulation after acceleration; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; speed reducer; takes "C" mount lenses of any focal length; has 16 sided prism, sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/2 frame 16mm and one to obtain true 8mm; with two Dark Room Loading, daylight handling Film Cassettes; power cord, remote control cord, and event synchronizer cord and connectors. Resolution: Center, 80 lines/mm vertical and horizontal. Edges 68 lines/mm vertical and horizontal.

Wt. 82 lbs.      \$8,450.00

### K2S20BE-230

HYCAM, HIGH SPEED MOTION PICTURE CAMERA, 1/4 frame 16mm or 1/2 8mm x 2000 Ft. capacity; 230V., A. C. 50/60 cycle input to motor. Frame rate variable from 400 to 20,000 pictures per second by use of built-in potentiometer. (No auto-transformer needed) with electronic (SCR) speed control for 1% frame rate regulation after acceleration; complete with event synchronizer; cut-off switch; 1/2.5 shutter; double timing light assembly; film footage counter; speed reducer; takes "C" mount lenses of any focal length; has 32 sided prism, sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/4 frame 16mm and one to obtain 1/2 frame 8mm; with two Dark Room Loading, daylight handling Film Cassettes; power cord, remote control cord, event synchronizer cord and connectors. Resolution: Center 80 lines/mm vertical and horizontal. Edges 68 lines/mm vertical and horizontal.

Wt. 82 lbs.      \$9,250.00

RED LAKE LABS., INC.



# CAMERA, 16 MM X 400 Ft. HIGH SPEED STREAK

## SK04E-115

HYCAM HIGH SPEED STREAK CAMERA, 16mm x 400 Ft. capacity, 115 volt AC 50/60 cycle input. Film velocity variable from 30" per second to 275' per second by use of built-in potentiometer. (No auto-transformer needed) With electronic (SCR) speed control, for 1% film velocity regulation after acceleration from 30" per second to 125' per second, with event synchronizer, cut-off switch, double timing light, film footage counter; takes "C" mount lenses of any focal length, with power cord, remote control cord, event synchronizer and connectors.

Wt. 30 lbs.

\$2,375.00

## SKS4E-115

HYCAM, HIGH SPEED STREAK CAMERA, 16mm x 400 Ft. capacity, 115 volt AC 50/60 cycle input. Film velocity variable from 3" per second to 275' per second by use of built-in potentiometer. (No auto-transformer needed) With electronic (SCR) speed control, for 1% film velocity regulation after acceleration from 3" per second to 125' per second, with event synchronizer, cut-off switch, double timing light, film footage counter; takes "C" mount lenses of any focal length, with power cord, remote control cord, event synchronizer and connectors.

Wt. 30 lbs.

\$2,625.00

## SK04E-230

HYCAM, HIGH SPEED STREAK CAMERA, 16mm x 400 Ft. capacity, 230 volt AC 50/60 cycle input. Film velocity variable from 30" per second to 275' per second by use of built-in potentiometer. (No auto-transformer needed) With electronic (SCR) speed control for 1% film velocity regulation after acceleration from 30" per second to 125' per second with event synchronizer, cut-off switch, double timing light, film footage counter; takes "C" mount lenses of any focal length, with power cord, remote control cord, event synchronizer and connectors.

Wt. 30 lbs.

\$2,450.00

## SKS4E-230

HYCAM, HIGH SPEED STREAK CAMERA, 16mm x 400 Ft. capacity, 230 volt AC 50/60 cycle input. Film velocity variable from 3" per second to 275' per second by use of built-in potentiometer. (No auto-transformer needed) With electronic speed control, for 1% film velocity regulation after acceleration from 30" per second to 125' per second, with event synchronizer, cut-off switch, double timing light, film footage counter; takes "C" mount lenses of any focal length, with power cord, remote control cord, event synchronizer and connectors.

Wt. 30 lbs.

\$2,700.00

RED LAKE LABS. INC.



## OPTICAL HEADS

HYCAM is so designed that the main optical parts are contained in a removable head. Mechanically, all optical heads are interchangeable with any of the film compartments and transport sections. Any of the non-E series are completely interchangeable within their own series. However, they can be made interchangeable with any of the other series by having a speed sensor installed in the head at the factory.

\*\*\*\*\*

### OPTICAL HEADS, FOR NON "E" MODEL (For Models without Electronic Speed Control)

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |            |            |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|
| <u>K20H</u>  | HYCAM, OPTICAL HEAD, 16mm full frame; with 1/2.5 shutter; single timing light assembly; takes "C" mount lenses of any focal length; has 8 sided prism, sprocket and shutter on one shaft. Fits all non speed control HYCAM film compartments and transport sections. Resolution: Center 68 lines/mm vertical and horizontal. Edges, 56 lines/mm vertical and horizontal.                                                                                                                     | Wt. 4 lbs. | \$915.00   |
| <u>K20HA</u> | HYCAM, OPTICAL HEAD, 1/2 frame 16mm or true 8mm; with 1/2.5 shutter; single timing light assembly; takes "C" mount lenses of any focal length; has 16 sided prism, sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/2 frame 16mm and one to obtain true 8mm. Fits all non speed control HYCAM film compartments and transport sections. Resolution: Center 80 lines/mm vertical and horizontal Edges, 68 lines/mm vertical and horizontal.      | Wt. 4 lbs. | \$1,065.00 |
| <u>K20HB</u> | HYCAM, OPTICAL HEAD, 1/4 frame 16mm or 1/2 frame 8mm; with 1/2.5 shutter; single timing light assembly; takes "C" mount lenses of any focal length; has 32 sided prism, sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/4 frame 16mm and one to 1/2 frame 8mm. Fits all non speed control HYCAM film compartments and transport sections. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal. | Wt. 4 lbs. | \$1,865.00 |

RED LAKE LABS., INC.



# OPTICAL HEADS

## OPTICAL HEADS, FOR "E" MODEL (For Models with Electronic Speed Control)

### K20HE

HYCAM, OPTICAL HEAD, 16mm full frame; with electronic speed sensor installed; with 1/2.5 shutter; double timing light assembly; takes "C" mount lense of any focal length; has 8 sided prism, sprocket and shutter on one shaft. Fits all HYCAM film compartments and transport sections. Resolution: Center, 68 lines/mm vertical and horizontal. Edges, 56 lines/mm vertical and horizontal.

Wt. 4 lbs.

\$1,000.00

### K20HAE

HYCAM, OPTICAL HEAD, 1/2 Frame 16mm or true 8mm; with electronic speed sensor installed; with 1/2.5 shutter; double timing light assembly; takes "C" mount lenses of any focal length; has 16 sided prism, sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/2 frame 16mm and one to obtain true 8mm. Fits all HYCAM film compartments and transport sections. Resolution: Center 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal.

Wt. 4 lbs.

\$1,150.00

### K20HBE

HYCAM, OPTICAL HEAD, 1/4 frame 16mm or 1/2 frame 8mm; with electronic speed sensor installed; with 1/2.5 shutter; double timing light assembly; takes "C" mount lenses of any focal length; has 32 sided prism, sprocket and shutter on one shaft; with 3 aperture masks, one for upper gate, one to obtain 1/4 frame 16mm and one to obtain 1/2 frame 8mm. Fits all HYCAM film compartments and transport sections. Resolution: Center, 80 lines/mm vertical and horizontal. Edges, 68 lines/mm vertical and horizontal.

Wt. 4 lbs.

\$1,950.00

RED LAKE LABS., INC.



## KITS, PRISM, SHUTTER, SPROCKET

The 8, 16, and 32 sided prism, sprocket, and shutter shaft assemblies can be interchanged from head to head.

\*\*\*\*\*

### K2P/S/S/E

8 Sided Prism, Sprocket, and Shutter Shaft Assembly, with Electronic Speed Sensor provision, including bearings and full frame 16mm aperture mask. Fits all HYCAM Optical Heads.

\$335.00

### K2P/S/S/AE

16 Sided Prism, Sprocket, and Shutter Shaft Assembly, with Electronic Speed Sensor provision, including bearings and 3 masks, one for use in upper gate, one for obtaining 1/2 frame 16mm and one for obtaining true 8mm. Fits all HYCAM Optical Heads.

\$485.00

### K2P/S/E/BE

32 Sided Prism, Sprocket, and Shutter Shaft Assembly, with Electronic Speed Sensor provision, including bearings and 3 masks, one for use in upper gate, one for obtaining 1/4 frame 16mm and one for obtaining 1/2 frame 8mm. Fits all HYCAM Optical Heads.

\$1,285.00

RED LAKE LABS., INC.



# FILM COMPARTMENT AND TRANSPORT SECTIONS

HYCAM, Film Compartment and Transport Sections are available in three sizes; 100 Ft., 400 Ft. and 2000 Ft. The Speed Reducer and Electronic Speed Control are optional in the 100 and 400 Ft. models and are furnished as standard equipment in the 2000 Ft. model. Prices for 400 Ft. models without built-in speed controls are available upon request.

All models without Electronic Speed Control will come equipped with a built-in rectifier for external speed control from an AC source, most HYCAM users have an RL236 Auto Transformer for this purpose.

\*\*\*\*\*

## K20M1R

HYCAM, 100 Ft. FILM COMPARTMENT AND TRANSPORT SECTION; complete 100 Ft. HYCAM camera less optical head; includes: cut-off switch; event synchronizer; built-in rectifier; with power cord and event synchronizer cord. Accepts all HYCAM Optical Heads. Wt. 10 lbs. \$625.00

## K2SM1R

HYCAM, 100 Ft. FILM COMPARTMENT AND TRANSPORT SECTION; complete 100 Ft. camera less Optical head; includes: cut-off switch; event synchronizer; built-in rectifier; with power cord, and event synchronizer cord. Accepts all HYCAM Optical Heads. Wt. 11 lbs. \$775.00

## K20M4E-115

HYCAM, 400 Ft. FILM COMPARTMENT AND TRANSPORT SECTION; complete 400 Ft. camera less optical head; 115V., A.C., 50/60 cycle input to motor. Frame rate variable from 100 to 11,000 full frame, 200 to 22,000 half frame, 400 to 44,000 quarter frame pictures per second by use of built-in potentiometer. (No auto-transformer needed) With electronic (SCR) speed control for 1% frame rate regulation after acceleration from 100 to 5000 full frame, 200 to 10,000 half frame, or 400 to 20,000 quarter frame pictures per second; event synchronizer; cut-off switch; film footage counter; with power cord, remote control cord, and event synchronizer cord. Accepts all HYCAM optical heads of the "E" series. Wt. 28 lbs. \$1,970.00

## K2SM4E-115

HYCAM, 400 Ft. FILM COMPARTMENT AND TRANSPORT SECTION; complete 400 Ft. camera less optical head; 115V., A.C., 50/60 cycle input to motor. Frame rate variable from 10 to 11,000 full frame, 20 to 22,000 half frame, 40 to 44,000 quarter frame pictures per second by use of built-in potentiometer. (No auto-transformer needed) With electronic (SCR) speed control for 1% frame rate regulation after acceleration from 10 to 5000 full frame, 20 to 10,000 half frame, or 40 to 20,000 quarter frame pictures per second; speed reducer; event synchronizer; cut-off switch; film footage counter; with power cord, remote control cord, and event synchronizer cord. Accepts all HYCAM optical heads of the "E" series. Wt. 30 lbs. \$2,220.00

RED LAKE LABS., INC.



# FILM COMPARTMENT AND TRANSPORT SECTIONS

## K20M4E-230

HYCAM, 400 Ft. FILM COMPARTMENT AND TRANSPORT SECTION; complete 400 Ft. camera less optical head; 230V., A.C. 50/60 cycle input to motor. Frame rate variable from 100 to 11,000 full frame, 200 to 22,000 half frame, 400 to 44,000 quarter frame pictures per second by use of built-in potentiometer. (No auto-transformer needed) With electronic (SCR) speed control for 1% frame rate regulation after acceleration from 100 to 5000 full frame, 200 to 10,000 half frame, or 400 to 20,000 quarter frame pictures per second; event synchronizer; cut-off switch; film footage counter; with power cord, remote control cord, and event synchronizer cord. Accepts all HYCAM optical heads of the "E" series.

Wt. 28 lbs. \$2,045.00

## K2SM4E-230

HYCAM, 400 Ft. FILM COMPARTMENT AND TRANSPORT SECTION; complete 400 Ft. camera less optical head; 230V., A. C. 50/60 cycle input to motor. Frame rate variable from 10 to 11,000 full frame, 20 to 22,000 half frame, 40 to 44,000 quarter frame pictures per second by use of built-in potentiometer. (No auto-transformer needed) With electronic (SCR) speed control for 1% frame rate regulation after acceleration from 10 to 5000 full frame, 20 to 10,000 half frame, or 40 to 20,000 quarter frame pictures per second; speed reducer; event synchronizer; cut-off switch; film footage counter; with power cord, remote control cord, and event synchronizer cord. Accepts all HYCAM optical heads of the "E" series.

Wt. 30 lbs. \$2,295.00

## K2SM20E-115

HYCAM, 2000 Ft. FILM COMPARTMENT AND TRANSPORT SECTION; complete 2000 Ft. camera less optical head; 115V., A. C. 50/60 cycle input to motor. Frame rate variable from 100 to 5000 full frame, 200 to 10,000 half frame, 400 to 20,000 quarter frame pictures per second by use of built-in potentiometer, (No auto-transformer needed) With electronic (SCR) speed control for 1% frame rate regulation after acceleration; event synchronizer; cut-off switch; film footage counter; with two Dark Room Loading, daylight handling Film Cassettes; power cord, remote control cord, and event synchronizer cord. Accepts all HYCAM optical heads of the "E" series.

Wt. 28 lbs. \$7,300.00

## K2SM20E-230

HYCAM, 2000 Ft. FILM COMPARTMENT AND TRANSPORT SECTION; complete 2000 Ft. camera less optical head; 230V., A. C. 50/60 cycle input to motor. Frame rate variable from 100 to 5000 full frame, 200 to 10,000 half frame, 400 to 20,000 quarter frame pictures per second by use of built-in potentiometer, (No auto-transformer needed) With electronic (SCR) speed control for 1% frame rate regulation after acceleration event synchronizer; cut-off switch; film footage counter; with two Dark Room Loading, daylight handling Film Cassettes; power cord, remote control cord, and event synchronizer cord. Accepts all HYCAM optical heads of the "E" series.

Wt. 28 lbs. \$7,300.00

RED LAKE LABS., INC.



# ACCESSORIES, HYCAM

## GLASS RETICLES

|       |                                                                                                                                                |         |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| K2R-1 | Reticle, Engraved Glass, for superimposing <u>Cross Hairs</u> in HYCAM heads equipped with full frame, half frame or quarter frame 16mm masks. | \$60.00 |
| K2R-2 | Reticle, Engraved Glass, for superimposing <u>Open Center Cross Hairs</u> in HYCAM heads equipped with full frame 16mm masks.                  | \$60.00 |
| K2R-3 | Reticle, Engraved Glass, for superimposing <u>Open Center Cross Hairs</u> in HYCAM heads equipped with 1/2 or 1/4 frame 16mm masks.            | \$60.00 |
| K2R-4 | Reticle, Engraved Glass, for superimposing <u>Cross Hairs</u> in HYCAM heads equipped with 8mm or 1/2 frame 8mm masks.                         | \$60.00 |
| K2R-5 | Reticle, Engraved Glass, for superimposing <u>Open Center Cross Hairs</u> in HYCAM heads equipped with 8mm or 1/2 frame 8mm masks.             | \$60.00 |

## SHUTTER, CAMERA

### Shutters for Full Frame 16mm HYCAM

|           |         |           |         |
|-----------|---------|-----------|---------|
| K2S-1/2.5 | \$18.50 | K2S-1/20  | \$22.50 |
| K2S-1/5   | 18.50   | K2S-1/50  | 22.50   |
| K2S-1/10  | 22.50   | K2S-1/100 | 22.50   |

### Shutter for Half Frame 16mm or 8mm HYCAM

|                               |         |              |         |
|-------------------------------|---------|--------------|---------|
| K2S16-1/2.5                   | \$24.50 | K2S16-1/20   | \$24.50 |
| K2S16-1/5                     | 24.50   | K2S16-1/50   | 24.50   |
| K2S16-1/10                    | 24.50   | *K2S16-1/100 | 24.50   |
| *(for use with 8mm Mask only) |         |              |         |

### Shutters for 1/4 Frame 16mm or 1/2 Frame 8mm HYCAM

|             |         |            |         |
|-------------|---------|------------|---------|
| K2S32-1/2.5 | \$60.00 | K2S32-1/10 | \$60.00 |
| K2S32-1/5   | 60.00   | K2S32-1/20 | 60.00   |

## TIMING LIGHT ASSEMBLIES

|       |                                                                                           |         |
|-------|-------------------------------------------------------------------------------------------|---------|
| K2DTL | Extra Timing Light Assembly installed in camera at time of manufacture.                   | \$25.00 |
| K2TL  | Parts for extra Timing Light Assembly to be installed in the field by customer.           | \$25.00 |
| K2T   | Labor and parts for extra Timing Light Assembly installed at factory after manufacturing. | \$50.00 |

RED LAKE LABS., INC.



# ACCESSORIES, HYCAM

## SPEED SENSOR

K2SC-1      Electronic Speed Sensor, Factory Installation, for model K20H, K20HA, and K20HB or for conversion of any 100 Ft. Optical Heads.      \$60.00

## SHUTTER SYNC-PULSE UNIT

K2PP-1      Photo Pick Up, for electronic flash synchronizer or HYCAM shutter position indicator. Output: 1.4V, positive pulse.      Wt. 1 lb.      \$180.00

## SPEED REDUCER ASSEMBLIES

S-1      Speed Reducer for 100 Ft. HYCAM retro fit when camera is returned to the factory.      \$175.00

S-4      Speed Reducer for 400 Ft. HYCAM retro fit when camera is returned to the factory.      \$275.00

## SPOOL ADAPTERS

RLF-41      Adapter, to use 100 Ft. Film spools in the 400 Ft. HYCAM. (To Prevent film shatter at end of the run.) Required on take up only.      Wt. 8 ozs.      \$ 45.00

RLF-42      Adapter, to use 200 Ft. film spools in the 400 Ft. HYCAM. (To prevent film shatter at end of the run.) Required on take up only.      Wt. 1 lbs.      \$ 45.00

## SPOOLS

K20F4      Film Spool, daylight loading, split reel, 16mm x 400 Ft. to accept Z core and T Core laboratory packaged films.      Wt. 8 ozs.      \$600.00

## CASSETTES

K2C20      Film Cassette, for K2S20E, 2000 Ft. HYCAM Dark Room Loading, daylight handling.      Wt. 9 lbs.      \$600.00

RED LAKE LABS., INC.



## ACCESSORIES, OPTICAL

### LENSES, COSMICAR (Made in Japan) In Focusing "C" Mount

|            |                                 |                |           |
|------------|---------------------------------|----------------|-----------|
| RLLC-1/2   | Lens, 12.5mm FL, f/1.9          |                | \$ 94.50  |
| RLLC-1     | Lens, 1 inch FL, f/1.4          |                | \$ 67.60  |
| RLLC-2     | Lens, 2 inch FL, f/1.9          |                | \$ 70.75  |
| RLLC-2A    | Lens, 2 inch FL, f/1.4          |                | \$ 92.50  |
| RLLC-3     | Lens, 3 inch FL, f/1.9          |                | \$ 68.00  |
| RLLC-3A    | Lens, 3 inch FL, f/1.4          |                | \$ 107.00 |
| RLLC-8     | Lens, 8 inch FL, f/3.5          | Wt. 2 lbs.     | \$ 165.00 |
| RLLC-Z 1:4 | Lens, Zoom 22.5mm to 90mm f/1.5 | Wt. 3-1/2 lbs. | \$ 300.00 |

### LENSES, ELGEET (Made in U.S.A.) In Focusing "C" Mount

|          |                       |  |           |
|----------|-----------------------|--|-----------|
| RLLE-1/2 | Lens, 13mm FL, f/1.5  |  | \$ 125.00 |
| RLLE-1   | Lens, 25mm FL, f/1.5  |  | \$ 99.00  |
| RLLE-2   | Lens, 51mm FL, f/1.5  |  | \$ 125.00 |
| RLLE-3   | Lens, 75mm FL, f/1.9  |  | \$ 105.00 |
| RLLE-4   | Lens, 100mm FL, f/2.7 |  | \$ 127.00 |
| RLLE-6   | Lens, 150mm FL, f/3.8 |  | \$ 135.00 |

### LENSES, PENTAX (Made in Japan) In Focusing Pentax Mount, Conversion Adapters Available

|                                                                       |                                                     |             |            |
|-----------------------------------------------------------------------|-----------------------------------------------------|-------------|------------|
| *RLLP-50                                                              | Lens 50mm FL, f/1.4                                 | Wt. 1/2 lb. | \$ 124.50  |
| *Recommended for oscillo or streak photography with all HYCAM models. |                                                     |             |            |
| RLLP-55                                                               | Lens 55mm FL, f/1.8                                 | Wt. 1/2 lb. | \$ 94.50   |
| RLLP-85                                                               | Lens 85mm FL, f/1.9                                 | Wt. 3/4 lb. | \$ 169.50  |
| RLLP-105                                                              | Lens 105mm FL, f/2.8                                | Wt. 1/2 lb. | \$ 129.50  |
| RLLP-135                                                              | Lens 135mm FL, f/3.5                                |             | \$ 149.50  |
| RLLP-8                                                                | Lens 8 inch FL, f/3.5                               | Wt. 2 lbs.  | \$ 189.50  |
| RLLP-12                                                               | Lens 12 inch FL, f/4                                | Wt. 5 lbs.  | \$ 279.50  |
| RLLP-20                                                               | Lens 20 inch FL, f/5                                | Wt. 7 lbs.  | \$ 450.00  |
| RLLP-40                                                               | Lens 40 inch FL, f/8<br>(Supplied with Lens Tripod) | Wt. 42 lbs. | \$1,195.00 |

RED LAKE LABS., INC.



# ACCESSORIES, OPTICAL

LENSES, KINOPTIK (Made in France) In Focusing "C" Mount

|            |                                         |            |
|------------|-----------------------------------------|------------|
| RLLK-1.9   | Lens, 1.9mm f/1.9 (197°)                | \$ 999.00  |
| RLLK-5.7   | Lens, 5.7mm, f/1.8 (97°)                | \$ 549.00  |
| RLLK-9     | Lens, 9mm FL, 5/1.5                     | \$ 349.00  |
| RLLK-12.5  | Lens, 12.5mm FL f/2.5                   | \$ 229.00  |
| RLLK-18    | Lens, 13mm FL, f/1.8                    | \$ 229.00  |
| RLLK-25    | Lens, 25mm FL, f/2                      | \$ 169.00  |
| RLLK-32    | Lens, 32mm FL, f/1.9                    | \$ 199.00  |
| RLLK-40    | Lens, 40mm FL, f/2                      | \$ 199.00  |
| RLLK-50-1  | Lens, 50mm FL, 5/2 (Close up for 1.1)   | \$ 199.00  |
| RLLK-50-2  | Lens, 50mm FL, f/2                      | \$ 349.00  |
| RLLK-50-3  | Lens, 50mm FL, f/1.3                    | \$ 299.00  |
| RLLK-75    | Lens, 75mm FL, f/2 (Close up for 1.1)   | \$ 229.00  |
| RLLK-100-1 | Lens, 100mm FL, f/2 (Close up for 1.1)  | \$ 349.00  |
| RLLK-100-2 | Lens, 100mm FL, f/2                     | \$ 499.00  |
| RLLK-150   | Lens, 150mm FL, f/2.5                   | \$ 399.00  |
| *RLLK-210  | Lens, 210mm FL, f/2.8                   | \$ 499.00  |
| *RLLK-300  | Lens, 300mm FL, f/3.5                   | \$ 549.00  |
| *RLLK-500  | Lens, 500mm FL, f/5.6 (12' to infinity) | \$ 599.00  |
| *RLLK-1000 | Lens, 1000mm FL, f/8                    | \$1,999.00 |

\*Extra Large Focusing wheel for 210, 300, and 500mm lenses \$ 39.95

Adjustable cradle for 100-500mm lenses \$ 139.00

Simple tripod support for 210-500mm lenses \$ 39.95

LENSES, ANGÉNIEUX (Made in France) In Focusing "C" Mount

|            |                                                                                                        |           |
|------------|--------------------------------------------------------------------------------------------------------|-----------|
| RLLAZ-1:10 | Lens, Angénieux Zoom 12mm to 120mm AZO model<br>supplied with 10" reflex view finder<br>Wt. 2-1/2 lbs. | \$ 970.00 |
|------------|--------------------------------------------------------------------------------------------------------|-----------|

RED LAKE LABS., INC.



## ACCESSORIES, OPTICAL

### OSCILLO AND STREAK ATTACHMENT

|          |                                                                                                                                           |         |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------|---------|
| K20SA-1P | Oscillo Attachment, adapter to take Pentax type lenses, including film guide roller assembly for 100 Ft. HYCAM                            | \$85.00 |
| K20SA-4P | Oscillo Attachment, to take Pentax type lenses, for use with 400 Ft. HYCAM.                                                               | \$60.00 |
| K20SA-1F | Oscillo Attachment, adapter to take Fastax lenses (50mm and up) including film guide roller assembly for 100 Ft. HYCAM.                   | \$85.00 |
| K20SA-4F | Oscillo Attachment adapter to take Fastax lenses, 50mm and up) for use with 400 Ft. HYCAM.                                                | \$60.00 |
| K2SA-1   | Lower Gate and Streak Attachment for placing adjustable slit at the film plane. For use with HYCAM.<br>(Use only with oscillo Attachment) | \$82.50 |

### TRACKING VIEW FINDER

|       |                                                                                                                                                                                    |                         |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| TVF-1 | Tracking View Finder, sports type, for use with any model HYCAM, fastens to side of camera. Has parallax adjustment, masks for 15mm, 25mm, 50mm, 75mm, and 150mm lenses, included. | Wt. 1-1/2 lbs. \$240.00 |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|

### "C" MOUNT EXTENSION TUBES

|          |                            |         |
|----------|----------------------------|---------|
| RLXTC-4  | 4 inch                     | \$15.00 |
| RLXTC-6  | 6 inch                     | \$18.00 |
| RLXTC-8  | 8 inch                     | \$21.00 |
| RLXTCS-1 | Set, 5mm, 10mm, 20mm, 40mm | \$20.00 |

RED LAKE LABS., INC.



# ACCESSORIES, OPTICAL

## "C" MOUNT BELLOWS UNIT

RLLBXT-1 Bellows Extension for use with any model HYCAM

Wt. 6 ozs. \$54.00

## LENS ADAPTERS FOR BELLOWS UNIT

RLFAP-1 Adapter to use Fastax lens on Bellows unit

\$32.00

RLKAP-1 Adapter to use Kodak "S" mount lens on Bellows Unit

\$15.00

RLCAP-1 Adapter to use "C" mount lens on Bellows Unit

\$13.00

## PENTAX MOUNT EXTENSION TUBE

RLXTCO Set, 7 - 1/2mm, 15mm, 30mm, for use with Oscillo Attachment or Pentax to "C" adapter.

\$18.95

## LENS ADAPTERS

RLFXAC-1 Adapter to use Fastax lens on HYCAM "C" Mount

\$32.00

RLKAC-1 Adapter to use Kodak "S" mount lens on HYCAM "C" mount.

\$22.00

RLPAC-1 Adapter to use Pentax Lens on HYCAM "C" Mount

\$32.00

RED LAKE LABS., INC.



# ACCESSORIES, ELECTRICAL AND ELECTRONIC

## TIMING LIGHT GENERATORS

|           |                                                                                                                                                                       |          |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| RLTLG-3   | Milli-Mite Timing Light Generator with 10, 100, 1000 cycles per second, complete with battery and cord.<br>Wt. 4 lbs.                                                 | \$240.00 |
| RLTLG-3DC | Milli-Mite Timing Light Generator, with 10, 100, 1000 cycles per second, with DC power supply 110V., A.C. in with cord.<br>Wt. 5 lbs.                                 | \$310.00 |
| RLDC-2    | DC Power Supply 110V., A. C. in fixed 40V., D. C. out. Remove battery and use with Milli-Mite Timing Light Generator, model TLF-3, with power cord.<br>Wt. 2-1/2 lbs. | \$ 75.00 |
| RLMTLG-2  | Micro-Milli-Mite Timing Light Generator, for high G loads, 10, 100, 1000 cycles per second.<br>Wt. 1 lb.                                                              | \$340.00 |

## TRANSFORMERS, VARIABLE

|           |                                                                                                                                                                                       |          |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| RL236-1MM | Powerstat, 115 Volt AC in, 0 to 300 volt AC out. has meter, input cord, fuse, switch, grounded output plugs and handle. Operates 100 Ft. HYCAM to the top rated speed.<br>Wt. 25 lbs. | \$215.00 |
| RL236-2MM | Powerstat, 230 volt AC in, 0 to 300 volt AC out. Has meter, input cord, fuse, switch, grounded output plugs and handle. Operates 100 Ft. HYCAM to the top rated speed.<br>Wt. 25 lbs. | \$215.00 |

## TRANSFORMERS, STEP DOWN

|       |                                                                                                                                            |          |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------|----------|
| RLT-1 | Transformer, Step Down, fixed, 230 volt AC in, 115 volt AC out, 8 watts, for use with Timing Light Generator RLTLG-3DC.<br>Wt. 1 lb.       | \$ 8.50  |
| RLT-3 | Transformer, Step Down, fixed, 230 volt AC in, 115 volt AC out, 2000 watts for use with 2 RLLI-1 Color Tran Lighting Units.<br>Wt. 25 lbs. | \$ 89.00 |

## EXPOSURE METER

|        |                                                                                                                                                      |          |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| RLEM-1 | Exposure Meter, 1/21 Degree, reflective, with neutral density filter; includes dials for converting shutter speed to HYCAM frame rate.<br>Wt. 2 lbs. | \$139.50 |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------|----------|



# ACCESSORIES, TRIPODS

## TRIPODS

|           |                                                                                                                                        |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------|
| RLTRI-1   | Tripod Stand, Elevator and Head, light weight, adjustable 38" to 80" for use with 100 Ft. HYCAM.<br>Wt. 12-1/2 lbs. \$136.50           |
| RLTRI-1T  | Tripod Stand and Elevator, part of RLTRI-1<br>Wt. 10 lbs. \$ 84.00                                                                     |
| RLTRI-1H  | Head, Geared, part of RLTRI-1.<br>Wt. 2-1/2 lbs. \$ 52.50                                                                              |
| RLTRI-1LH | Lo-Hi Unit for use with RLTRI-1.<br>Wt. 5 lbs. \$ 36.75                                                                                |
| RLTRI-3   | Tripod Stand, Elevator and Head, medium weight, adjustable 40" to 80" for use with 400 Ft. HYCAM.<br>Wt. 26 lbs. \$399.00              |
| RLTRI-3T  | Tripod Stand and Elevator, Part of RLTRI-3<br>Wt. 19 lbs. \$204.75                                                                     |
| RLTRI-3H  | Head, Geared, part of RLTRI-3<br>Wt. 7 lbs. \$194.25                                                                                   |
| RLTRI-3LH | Lo-Hi Unit for use with RLTRI-3<br>Wt. 19 lbs. \$ 94.50                                                                                |
| RLHH-3    | Hi-Hat for RLTRI-3 Tripod Head.<br>Wt. 6 lbs. \$ 26.25                                                                                 |
| RLTRI-4   | Tripod Stand, Elevator and Head, heavy weight, adjustable for 38-1/2" to 72-1/2", for use with 2000 Ft. HYCAM.<br>Wt. 56 lbs. \$855.75 |
| RLTRI-4T  | Tripod Stand and Elevator, part of RLTRI-4<br>Wt. 38 lbs. \$399.00                                                                     |
| RLTRI-4H  | Head, Geared, part of RLTRI-4<br>Wt. 18 lbs. \$456.75                                                                                  |
| RLHH-4    | Hi-Hat for RLTRI-4 Tripod Head<br>Wt. 6 lbs. \$ 26.25                                                                                  |
| RLTRI-5   | Travel Tripod Stand, Elevator, Head and Carrying Case for use with 100 Ft. HYCAM Wt. 17-1/2 lbs. \$162.75                              |
| RLQOM-1   | Camera Mount, Quick-on 4-1/2" x 8-1/8" x 1-7/8"<br>Wt. 3 lbs. \$ 40.00                                                                 |

RED LAKE LABS., INC.



# ACCESSORIES, LIGHTING UNITS AND CARRYING CASES

## LIGHTING UNITS

|         |                                                                                                                                                   |             |          |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|
| RLLI-1  | Lighting Unit, 1000 watt quartz iodine lamp with housing, stand and heat absorbing glass and bracket, with Fresnel lens. Operates from 115V line. | Wt. 15 lbs. | \$183.00 |
| RLLI-1L | Lamp 1000 watt quartz iodine. Replacement for above Lighting unit.                                                                                | Wt. 4 lbs.  | \$ 32.40 |
| RLLI-2  | Lighting Unit, alligator clamp, 750R lamp, porcelain socket, switch in line.                                                                      | Wt. 3 lbs.  | \$ 12.25 |
| RLLI-2L | Lamp, 750R, R-40, 750 watt.                                                                                                                       | Wt. 12 ozs. | \$ 4.50  |
| RLLI-4  | Lighting Unit, complete with 2 heads, heat absorbing glasses, adjustable mounting brackets, stand, Hi-Lo switch and 2 cross bars.                 | Wt. 6 lbs.  | \$150.00 |
| RLLI-4L | Lamp, Quartz Bromine 650W                                                                                                                         | Wt. 8 ozs.  | \$ 6.45  |

## CARRYING CASES

|         |                                                                                                                               |                |          |
|---------|-------------------------------------------------------------------------------------------------------------------------------|----------------|----------|
| RLCC-1  | Carrying Case, for 100 Ft. HYCAM, wooden with polyeurthane insert, with compartments for film, lenses, and other accessories. | Wt. 15 lbs.    | \$ 56.00 |
| RLCC-2  | Carrying Case, for 400 Ft. HYCAM, wooden with polyeurthane insert, with compartments for film, lenses and other accessories.  | Wt. 33 lbs.    | \$ 76.00 |
| RLCC-3  | Carrying Case, for 2000 Ft. HYCAM, wooden with polyeurthane insert, with compartments for lenses and accessories.             | Wt. 45 lbs.    | \$ 95.00 |
| RLCC-3A | Carrying Case, for 3 Film Cassettes, 2000 Ft. Capacity.                                                                       | Wt. 9 lbs.     | \$ 65.00 |
| RLCC-4  | Carrying Case, for HYCAM Head, wooden with polyeurthane insert, with compartments for lenses and accessories.                 | Wt. 6-1/2 lbs. | \$ 46.00 |

RED LAKE LABS., INC.



# ACCESSORIES, DATA ANALYZERS

## MOTION PICTURE PROJECTORS

RLLW-900 Stop action projector flicker free, forward-reverse 1 through 8, 16 and 24 FPS, remote control, frame counter built-in screen.

Wt. 26 lbs. \$985.00

RLLW-900 1/2 Stop action projector, 1/2 frame pull down for use with 16mm film having 8mm perforations. (This is a Red Lake exclusive item) Available only through Red Lake Labs.

Wt. 26 lbs. \$995.00

RLLW-M224A Photo Optical Data Analyzer, flicker free forward-reverse, 1-2-4-6-12-16-24 FPS 16mm x 400 Ft. capacity, frame counter, remote control.

Wt. 26 lbs. \$1,325.00

RLLW-M224 1/2 Same as above with half frame 16mm

Wt. 26 lbs. \$1,390.00

RLLW-M224-AV-126-TR

Dual purpose Data Analysis and Sound projector. Flicker free forward and reverse at 1-2-4-6-8-12-16 and 24 FPS. Remote control for single frame and all operating speeds. Illuminated frame counter. Transistorized amplifier for high quality sound projection, 2000 Ft. reel capacity.

\$1,765.00

RLLW-MK-100 Time lapse camera 16mm x 100 Ft. capacity. \$1,495.00

RLLW-MK-100-ES-400

Time lapse Camera 16mm x 400 Ft. capacity. \$2,050.00

RED LAKE LABS., INC.



# RENTAL OF EQUIPMENT

## RENTAL OF EQUIPMENT

All of the equipment in this price list is available for rental, (excepting replacement lamps) on a daily, weekly or monthly basis. One day rental is the minimum available.

## RENTAL CHARGES

DAILY ..... 1.3% of selling price

WEEKLY ..... 5.2% of selling price

MONTHLY ..... 15.6% of selling price

PLUS: \$25.00 Clean-up charge per rental period on camera only.

## RENTAL POLICY

Rental charges begin when you receive the equipment from the carrier and end when it is delivered to the carrier, provided air transportation is used for points outside the San Francisco Bay Area.

If surface transportation is used the chargeable rental period will begin in the AM of the day following the date of shipment from the plant and end in the PM of the date prior to receiving the equipment back at the plant.

## CREDIT FOR PURCHASE

A credit of 85% of the rental charges, will be extended to customers who elect to purchase rental equipment at any time during the term of the rental agreement. However, total credit allowed may not exceed 85% of the invoice value of the equipment. The \$25.00 clean-up charge is refunded when rental equipment is purchased.

## GUARANTEE AND WARRANTY STATEMENT

Prices subject to change without notice. All HYCAM products carry a 90 day unconditional guarantee.

All HYCAM products carry a 1 year warranty on defects in workmanship and material.

All prices are F.O.B. Santa Clara, California 95051, except as noted.

## SERVICE

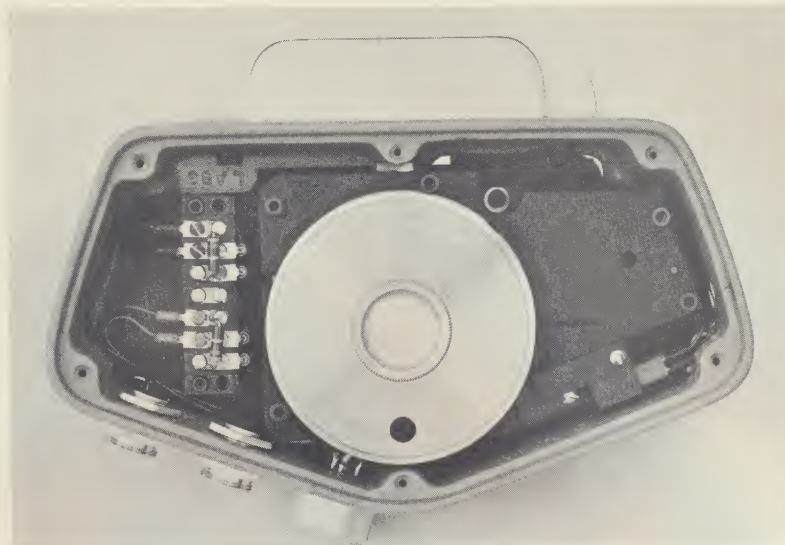
Conversion of K1 or K2 Optical Systems to HEA K2 higher light transmission and high resolution system.

\$450.00

## PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

RED LAKE LABS., INC.



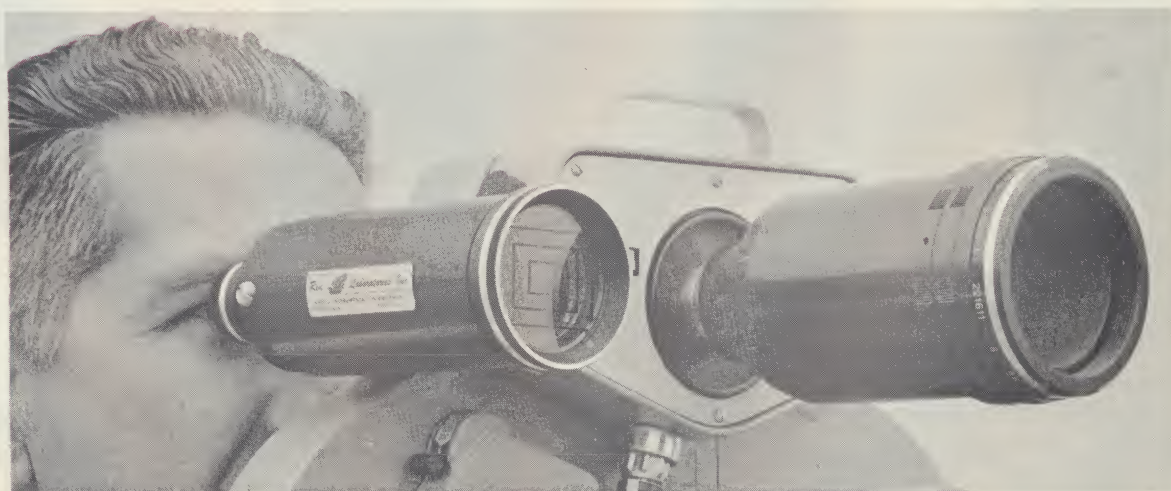


HYCAM Head, Model K20HE, Front Plate removed, showing  
Shutter Sync-Pulse Unit Model K2PP-2.



Prism, Sprocket, Shutter Assembly

Left to Right Models K2P/S/SE, K2P/S/S/AE, K2P/S/S/BE



Tracking View Finder, Model TVF-1. for use with all Model HYCAMS

Manufactured by RED LAKE LABORATORIES, INC., 2971 Corvin Dr., Santa Clara,  
California 95051

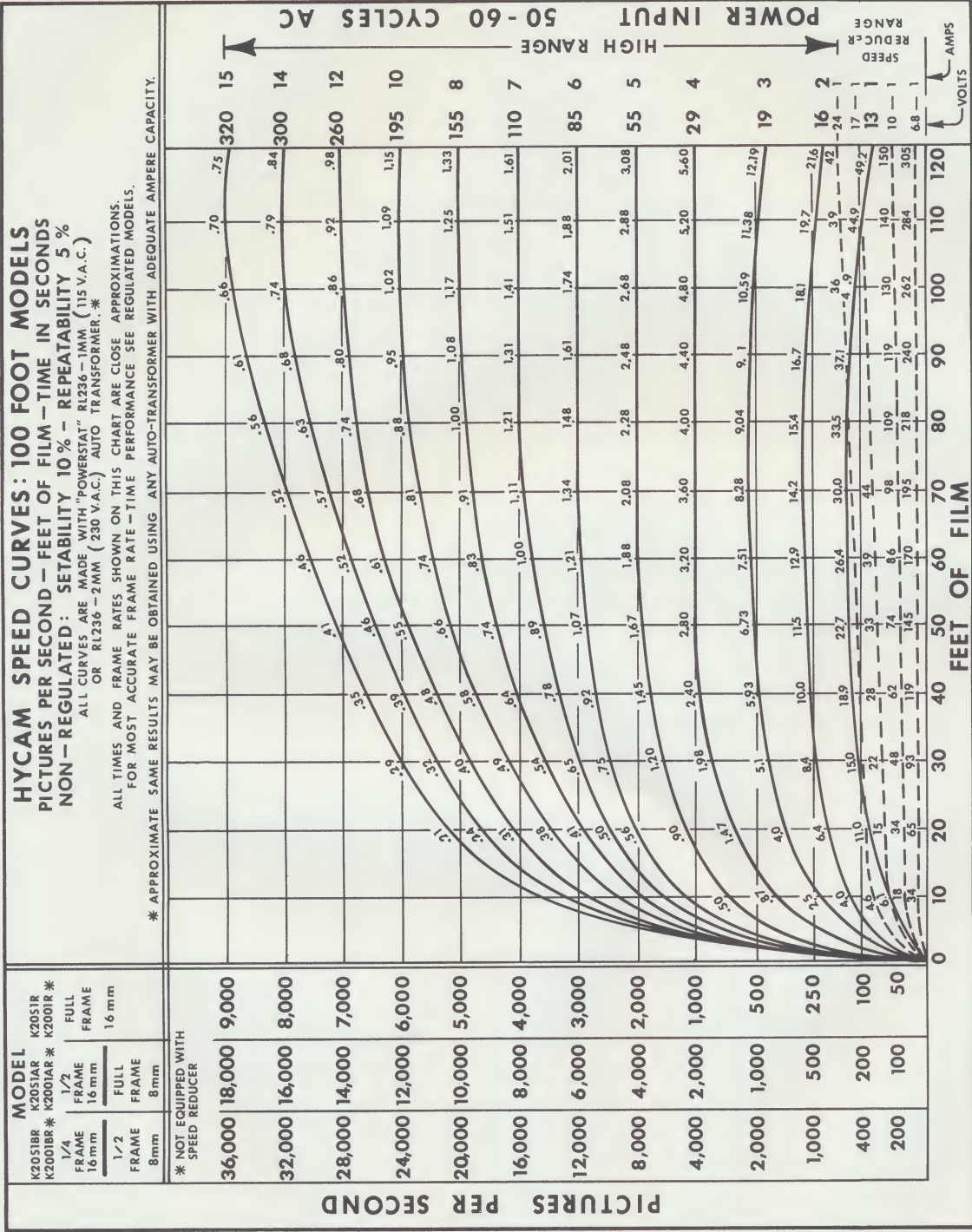




- VARIOUS "C" MOUNT EXTENSION TUBES and ADAPTERS FOR POPULAR LENSES USED ON HYCAM
- |                                             |                                             |
|---------------------------------------------|---------------------------------------------|
| 1. $\frac{1}{4}$ " "C" mount extension tube | 2. $\frac{1}{2}$ " "C" mount extension tube |
| 3. $\frac{3}{4}$ " "C" mount extension tube | 4. 1" "C" mount extension tube              |
| 5. Kodak "S" lens on Hycam "C" mount        | 6. Fairchild HS lens on Hycam "C" mount     |
| 7. Pentax lens on Hycam "C" mount           | 8. Fastax lens on Hycam "C" mount           |

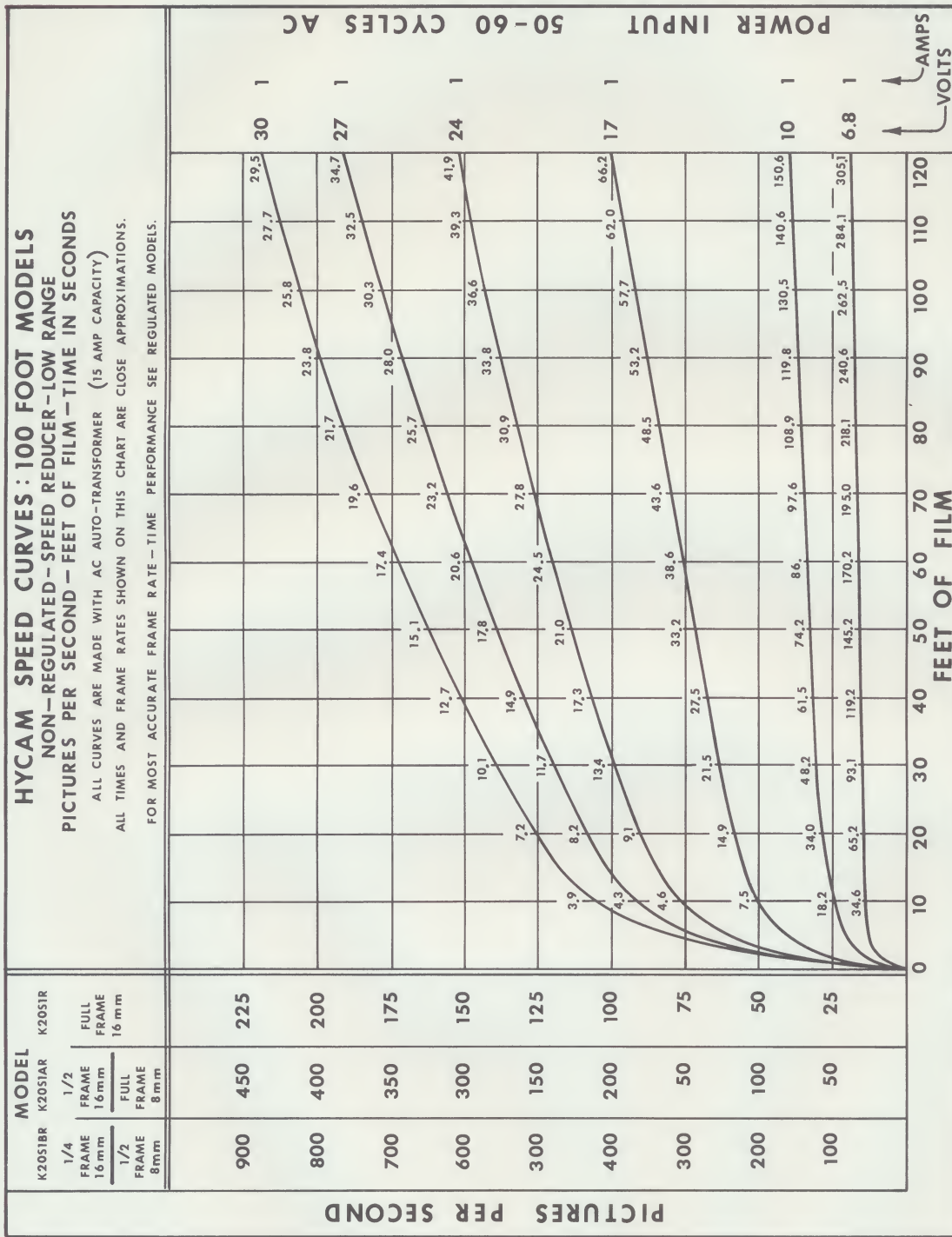
Manufactured by RED LAKE LABS., Santa Clara, California.





**Red Lake Laboratories, Inc.**  
 2971 CORVIN DRIVE  
 KIFER INDUSTRIAL PARK  
 SANTA CLARA, CALIFORNIA 95051  
 TELEPHONE (408)-739-3034  
 TWX 910-339-9241

PHOTO INSTRUMENTATION EQUIPMENT  
 Products the User Likes



# Red Lake Laboratories, Inc.

PHOTO INSTRUMENTATION EQUIPMENT

Products the User Likes

2971 CORVIN DRIVE  
 KIFER INDUSTRIAL PARK  
 SANTA CLARA, CALIFORNIA 95051  
 TELEPHONE (408)-739-3034  
 TWX 910-339-9241

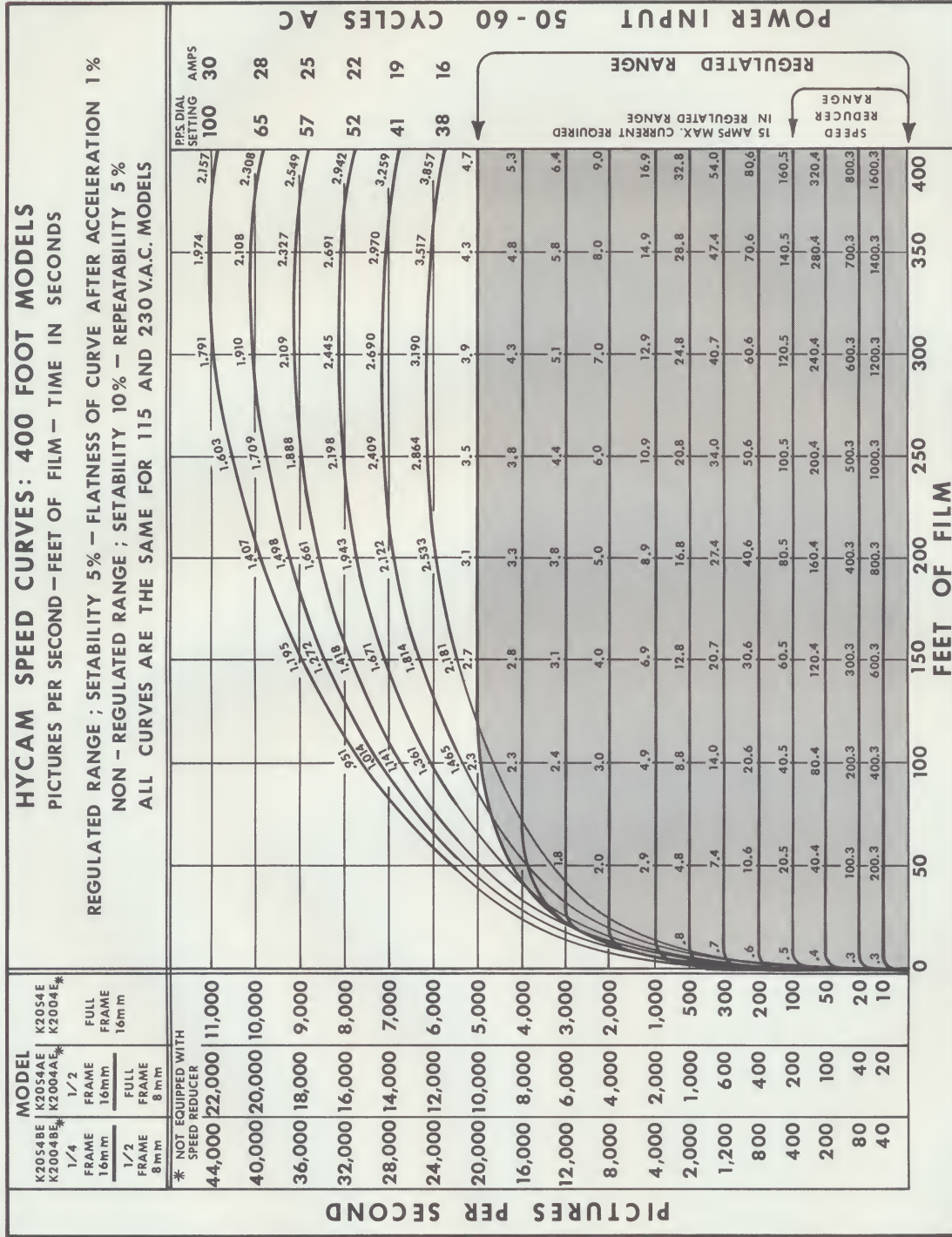


ALL CURVES ARE THE SAME FOR 115 AND 230 V.A.C. MODELS  
REGULATED RANGE ; SETABILITY 5% — FLATNESS OF CURVE AFTER ACCELERATION 1%  
NON — REGULATED RANGE ; SETABILITY 10% — REPEATABILITY 5%

**Red Lake Laboratories, Inc.**  
PHOTO INSTRUMENTATION EQUIPMENT  
2971 CORVIN DRIVE  
KIFER INDUSTRIAL PARK  
SANTA CLARA, CALIFORNIA 95051  
TELEPHONE (408)-739-3034  
TWX 910-339-9241  
*Products the User Likes*

## Products the User Likes





**Red Lake Laboratories, Inc.**

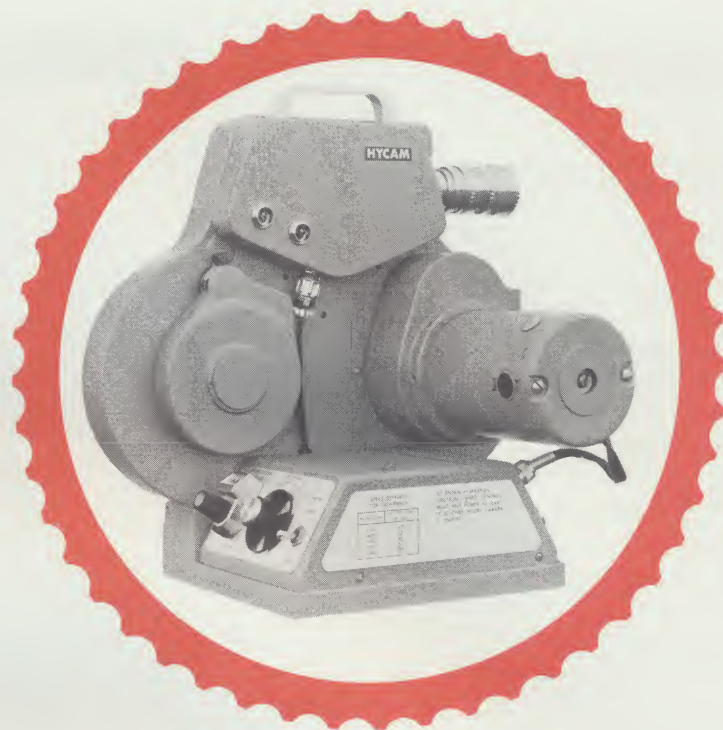
2971 CORVIN DRIVE  
KIFER INDUSTRIAL PARK  
SANTA CLARA, CALIFORNIA 95051  
TELEPHONE (408) — 739-3034  
TWX 910-339-9241

PHOTO INSTRUMENTATION EQUIPMENT

Products the User Likes



# Red Lake Labs



## HYCAM

# OSCILLO-STREAK CAMERA

## 16-mm, 400-ft film capacity

The Hycam Oscillo-Streak Camera comprises the rugged, reliable, proven Hycam film transport capable of moving 16-mm film, at low and high speeds, past an adjustable slit located in the film plane of a c-mount objective lens. When photographing an event, the camera produces a graphic representation of time in the longitudinal plane of the film plotted against motion, recorded across the film.

Design of the film transport in the model SK4E camera, illustrated, is based on the established 400-ft Hycam High-Speed Rotating-Prism Motion-Picture Camera and includes electronically regulated film speeds from 3 in. per sec to 150 ft per sec of film. A top speed of 275 ft per sec, unregulated, is achieved. Standard 400-ft day-light-loading spools of 16-mm film are used.

Built into the film transport are an event synchronizer, a film-footage counter, dual timing lights, through-the-lens focusing finder, and a universal (a-c/d-c) motor drive capable of operating directly off the line with either 115- or 230-volt 50/60 Hz input and completely without the use of autotransformers or other auxiliary control devices. The camera comes equipped with power and remote-control cables.

Located at the film aperture, the slit is easily adjustable from 0 to 0.3 in. in height. An oscilloscope trace or other secondary image can be simultaneously superimposed on the film in real time with the primary streak recording, by the addition of a simple accessory. C-mount lenses are used, because of their wide availability, and imaged directly on the film. The general optical film-threading arrangement can be seen in the illustration, over.

Combined with an accessory electronic-flash synchronizer, the Hycam Oscillo-Streak Camera can be used to produce full-frame 16-mm framed pictures up to full speed, limited only by the capabilities of the stroboscopic equipment.

### FEATURES:

- \* Solid-state servo-type film-speed regulation — 3 in. to 150 ft per sec
- \* Top film speed — 275 ft per sec
- \* Direct off-the-line operation without autotransformer or other auxiliary control device — 115- or 230-v versions available
- \* Double-image superimposition and strobe-framed 16-mm picture capabilities available

more ➤

*continued*

# OSCILLO-STREAK CAMERA

## SPECIFICATIONS

Model SK4E

Film Capacity

16-mm by 400-ft

Film-Speed Range

Electronically regulated

3 in. per sec to 150 ft per sec

Unregulated

3 in. per sec to 275 ft per sec

Film-Plane Slit Adjustment

0 to 0.3 in., double-bladed

Lens Fitting

C-mount

Power Requirements

Direct off-the-line operation —  
specify 115- or 230-volt, 50/60 Hz

Framing Operation

Available with accessory electronic-  
flash synchronizer

Focusing and Framing

Through-the-lens

Other Available Accessories:

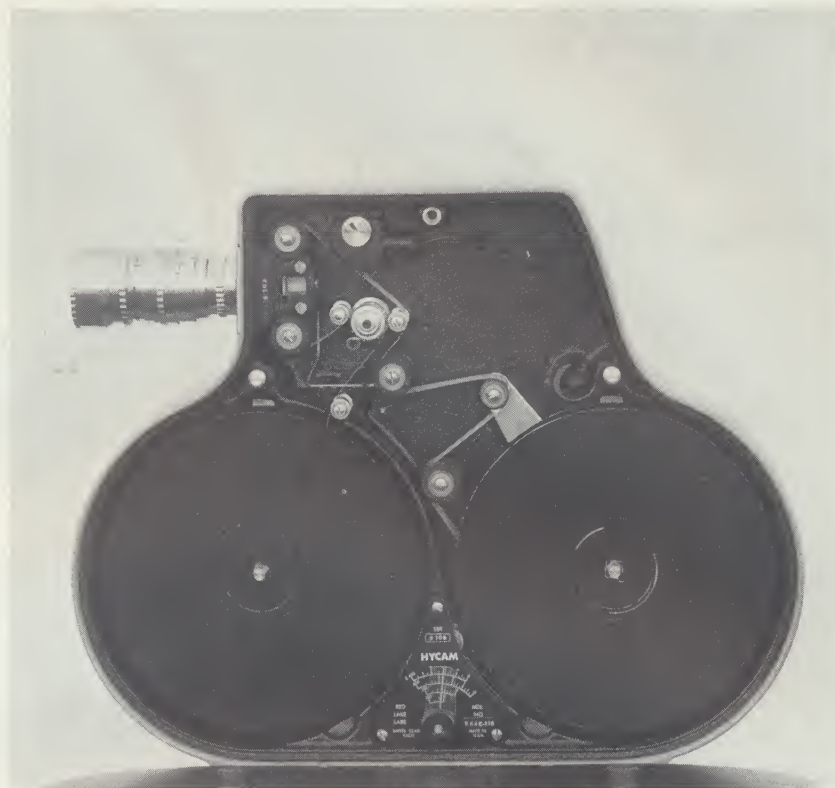
Reticles, Speed Reducer, Film-Spool Adaptors,  
Lenses, Tracking View Finder, Extension Tubes  
and Bellows, Lens Adaptors, Timing-Light  
Generators, Auto- and Step-Down Transformers,  
Exposure Meters, Tripods, Lighting Units,  
Carrying Cases, and Projectors.

Dimensions

|                |    |
|----------------|----|
| Height, inches | 15 |
| Width, inches  | 15 |
| Depth, inches  | 12 |
| Weight, pounds | 32 |

Other Red Lake Products:

Hycam 100-, 400-, and 2000-ft High-Speed  
Rotating-Prism Motion-Picture Cameras;  
High-Speed Intermittent Cameras.



Operating side of the Hycam Oscillo-Streak Camera with door off, showing objective lens, top left, imaging directly on adjustable slit and film gate; film-threading arrangement; and event synchronizer, bottom center.

## Distributed by:

**FULLY  
GUARANTEED**

90-day guarantee: If, for any reason, you are not completely satisfied with any Red Lake product within 90 days, you may return it for full credit.

One-year warranty covers any defect in workmanship or material.

If desired, Red Lake equipment can be rented with advantageous rental credits against ultimate purchase. Ask about our 10-day free-trial plan.

# Red Lake Laboratories, Inc.

PHOTO INSTRUMENTATION EQUIPMENT

*Products the User Likes*

2971 CORVIN DRIVE  
KIFER INDUSTRIAL PARK  
SANTA CLARA, CALIFORNIA 95051  
TELEPHONE (408)-739-3034  
TWX 910-339-9241





MODEL RLTRI-3LH LO-HI UNIT

For use with RLTRI-3 Tripod. Entire Lo-Hi Unit is raised and lowered by elevator. Takes standard RLTRI-3 Head. Minimum height of camera plate from floor 11". Weight 9 lbs.

RED LAKE LABORATORIES, INC., Santa Clara, California





#### MODEL RLTRI-3 TRIPOD

For use with 460' Model Hycam Cameras or loads up to 65 lbs. Equipped with special 360° geared head, 90° tilt, sliding dove tail camera plate with 2-1/2" forward and backward movement from center, offset 3/8-16 camera mounting screw, locks in all positions. Height of camera plate adjustable from 40" to 80". Weight 26 lbs.

RED LAKE LABORATORIES, INC., Santa Clara, California





MODEL RLTRI-1 TRIPOD

This tripod is recommended for use with 100' Hycam. It is a sturdy light weight versatile unit with a worm-gear elevator post. It has a spring loaded geared 90° tilt head. Weight: 13 lbs.

Manufactured for Red Lake Labs. Inc., by Quick-Set  
RED LAKE LABS. INC., Santa Clara, California.





RLLC "C" MOUNT COSMICAR LENSES (MADE IN JAPAN)

12.5mm through 200mm available including a Zoom 22.5mm to 90mm f/1.5.



RLLE "C" MOUNT ELGEET LENSES (MADE IN U.S.A.)

13mm through 150mm available.

Many other models also available.

RED LAKE LABORATORIES, INC., 2971 Corvin Dr., Santa Clara, Calif.





RLLP "PENTAX" MOUNT LENSES (MADE IN JAPAN)

50mm recommended for HYCAM Oscillo-Streak Applications. Other focal lengths up to 1000mm available. Pentax to "C" Adapter also available.



RLLK "C" MOUNT KINOPTIK LENSES (MADE IN FRANCE)

1.9mm through 1000mm available.

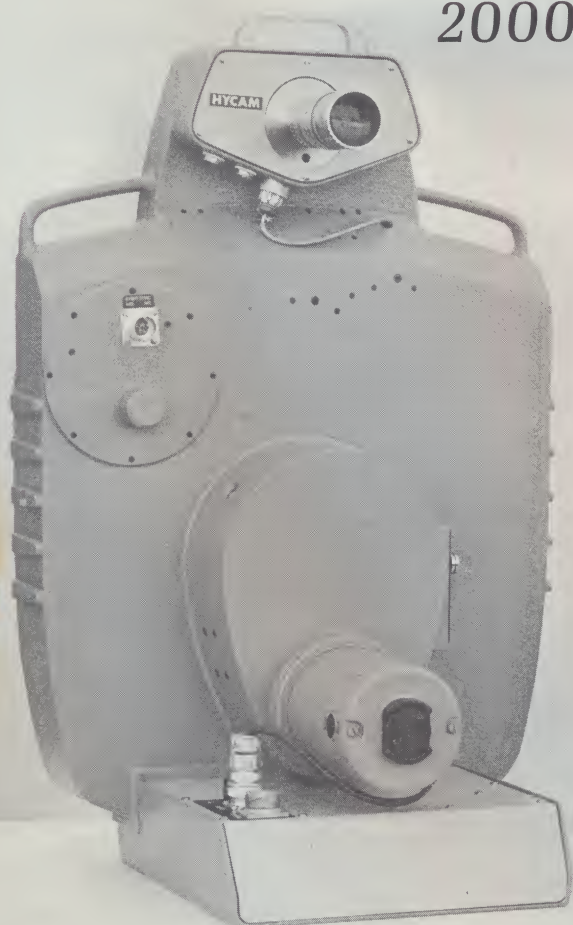


*Red  
Lake  
Labs*



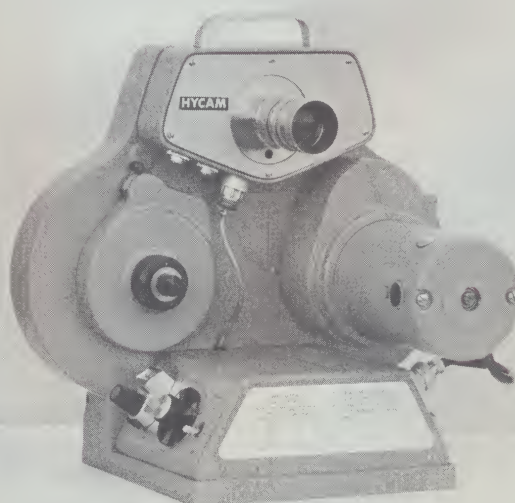
## High-Speed Motion-Picture Cameras

2000

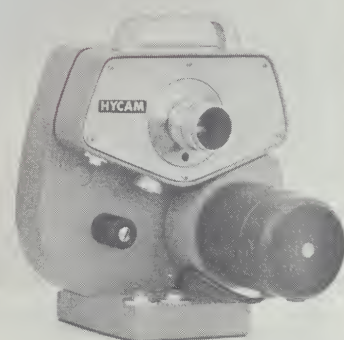


*film footages*

400



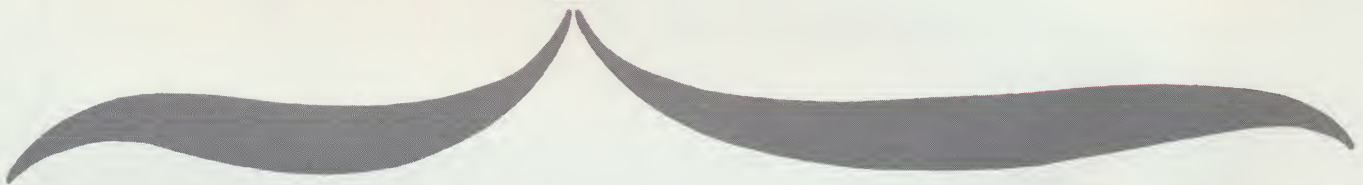
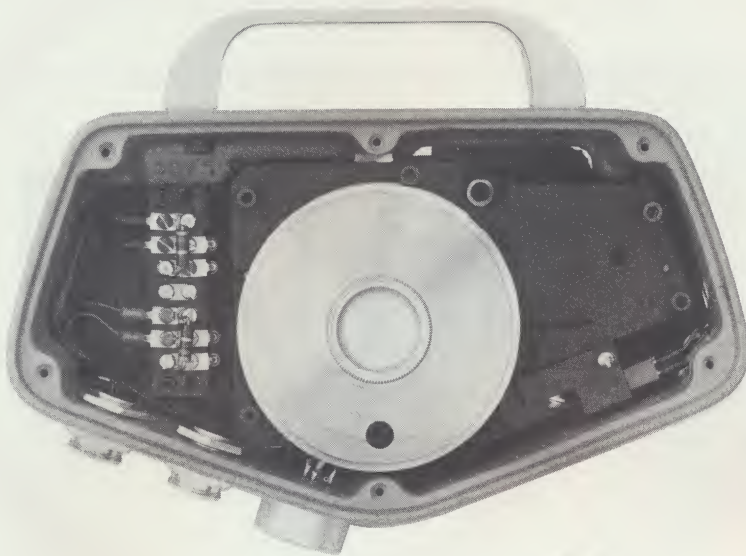
100



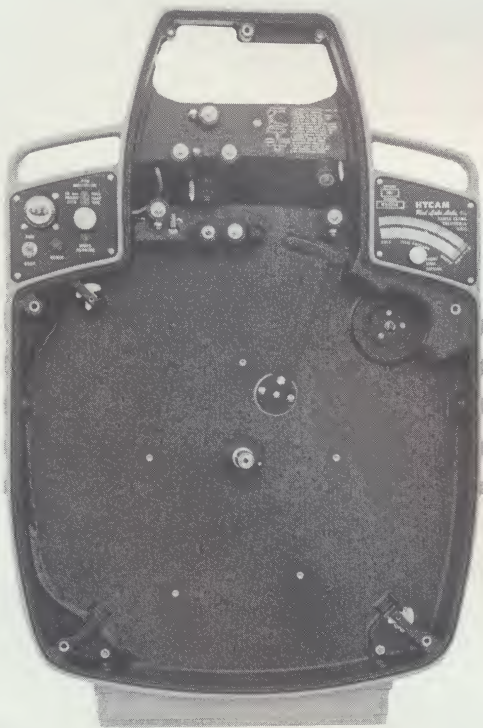
**The World's Most Advanced Rotating-Prism Cameras**



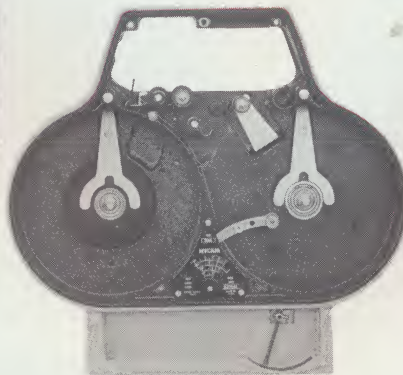
# **HYCAM** **PATENTED** **GEARLESS** **OPTICAL** **UNIT**



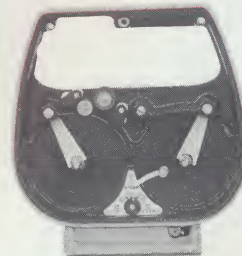
## **ONE OF THREE** **FILM** **TRANSPORTS**



**2000 - Ft**



**400 - Ft**



**100 - Ft**



# THE MOST ADVANCED ROTATING-PRISM MOTION-ANALYSIS SYSTEM

*with*

- **MOST BUILT-IN FEATURES**

No external control accessories required for 400- and 2000-ft cameras even at top speeds. Integral electronic speed regulator. 100-ft model, only, requires autotransformer, has electronic speed regulator as accessory. 115- or 230-volt models available for off-the-line operation.

- **HIGHEST RESOLUTION**

Uniform exposures, comparable to intermittent cameras.

- **WIDEST SPEED RANGE**

Highest as well as lowest frame rates with single motor: 10 to 44,000 pictures per second.

- **GREATEST FLEXIBILITY**

Five frame formats: full-, half-, and quarter-frame 16-mm; true 8-mm; and half-frame 8-mm.

Accessories provide for cine-oscillography, streak, time-lapse, and self projection.

- **FINEST OPTICAL SYSTEM**

All internal optics HEA-coated. This special high-efficiency antireflection optical coating transmits almost all the visible spectrum and consequently greatly enhances both black-and-white and color films.

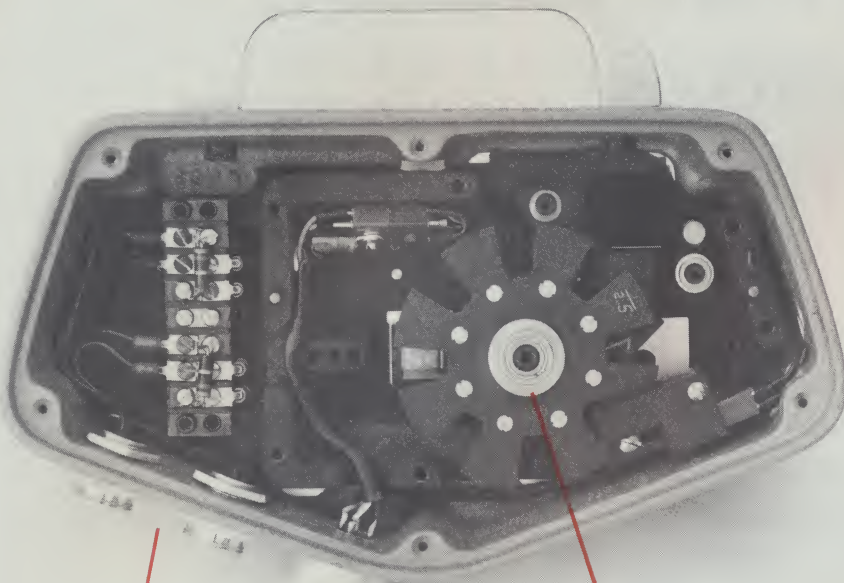
- **LOWEST COST**

Advanced design, fully covered by broad patent grants,\* combines segmented shutter, rotating prism, and film sprocket on a single shaft, eliminates troublesome gearing, simplifies manufacture, and results in the lowest cost of any similar camera.

\*Patent No. 3,259,448. Other patents pending.



# HYCAM F



## SPEED SENSOR

Photodiode signal circuitry for electronic speed control.

## TIMING LIGHT

Circuitry and external connections shown. Single timing light assembly is standard for the 100-ft models, double assembly for the 400- and 2000-ft models.

## SMOOTH-START CLUTCH

Viscous clutch, located between motor and takeup spindle, brings film to speed smoothly without expensive external voltage-limiting devices.

## INTERCHANGEABLE SHUTTERS

Standard shutter gives an exposure ratio of 1/2.5 (at 1000 pps, shutter speed is 1/2500 sec). Other shutters are available down to 1/100 for a 1.0 micro-second exposure at 10,000 pps without reduction in frame height.

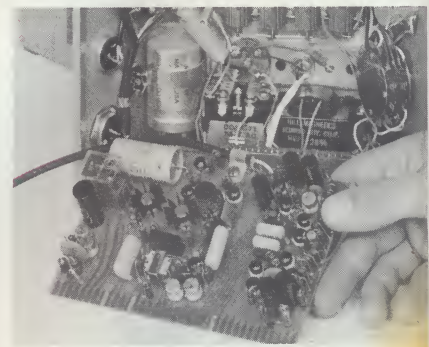
## SINGLE MOTOR

Sturdy universal (a-c/d-c) motor handles entire speed range from 10 to 44,000 pps. Speed-reducer accessory covers low range for 100- and 400-ft models, standard equipment for 2000-ft model.

## HEART OF THE SY

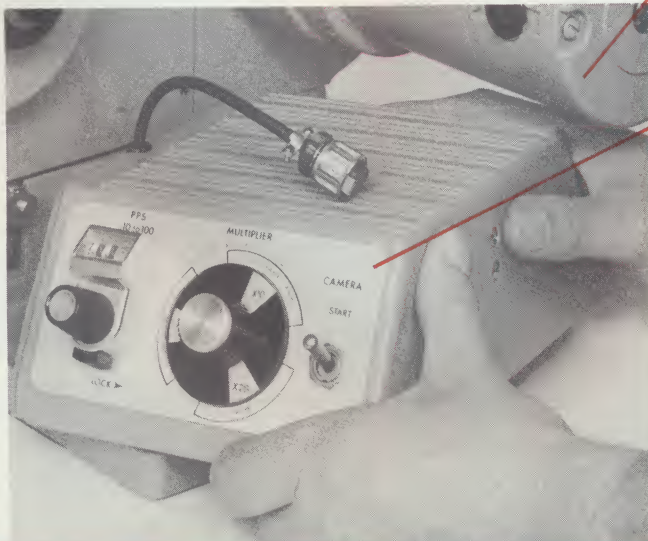
Shown above is the combined shutter sprocket assembly, the concept that is outstanding in the field.

By eliminating gearing, it permits the steadiest, highest-resolution picture comparable to pin-registered camera film.



## ELECTRONIC SPEED CONTROL

Speed-regulator controls of solid-state modular plug-in design are standard equipment with the 400- and 2000-ft models and are available as a separate accessory unit for the 100-ft model. Regulators give continuously variable speed control within 1 per cent of framing rate up to 5000 pps for the 400- and 2000-ft models and up to 3000 pps for the 100-ft models. Frame rates increase with reduced frame formats.





# FEATURES

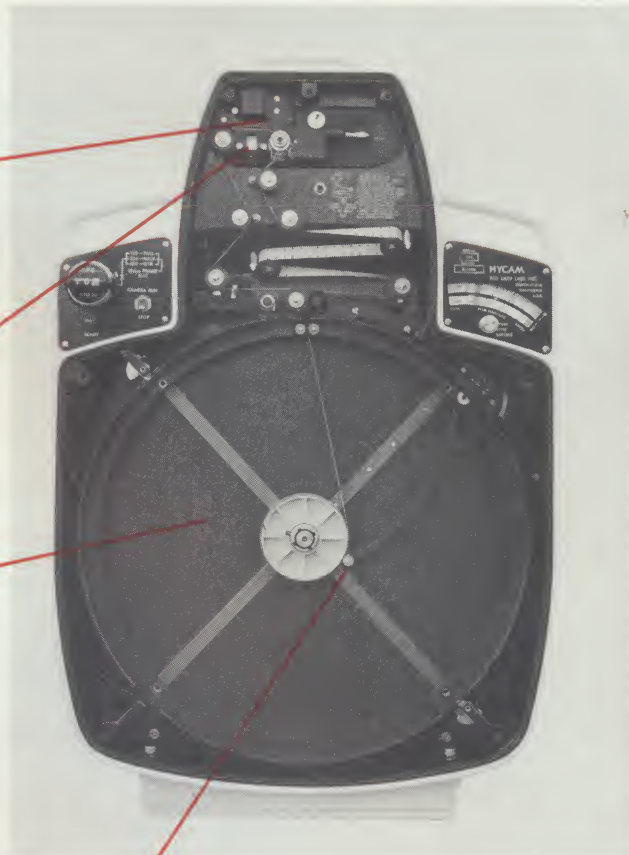


## FLAT FILM GATE

Pictures look like intermittent frames.

## FILM COMPARTMENT

Design of housing minimizes film chips at the end of run. Fingertip spool ejectors are provided in the 100- and 400-ft models. The 2000-ft model uses two interchangeable darkroom-loading cassettes for film supply and takeup.



## C-MOUNT LENSES

Use of inexpensive and readily available c-mount lenses of any focal length adds to Hycam versatility. Lens adaptors that accept most other lenses are available as accessories.

## EVENT SYNCHRONIZER

This adjustable device triggers the event at a preset point in the film, also serves as a film-footage counter on the 400- and 2000-ft models.

## STEM

ter, prism, and  
makes Hycam

Hycam to take  
ctures — com-  
m.

## FILM-SUPPLY BRAKE

Special servo brake on the 400- and 2000-ft models prevents supply-spool over-run for any length of film and at any frame rate. No drag during acceleration. Makes start-stop operation possible up to intermediate frame rates.

## VIEWING AND FOCUSING

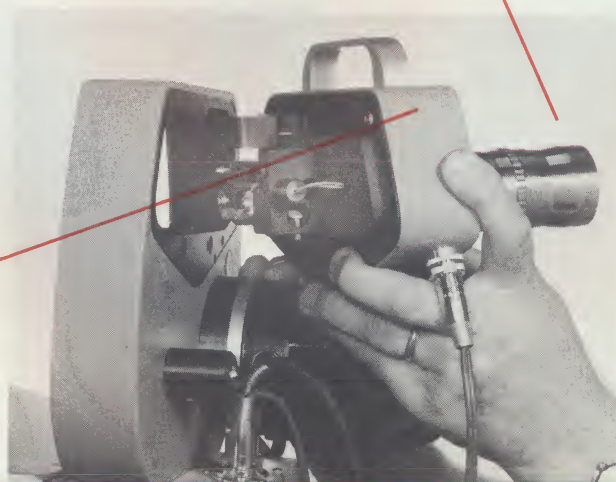
Through-the-lens viewer and focuser gives direct upright image from ground-glass focusing gate. Fifteen-power critical-focusing magnifier and cine-oscillography attachments are available as accessories.

## CUTOFF SWITCH

Tension-actuated switch interrupts motor power at end of film.

## INTERCHANGEABLE HEADS

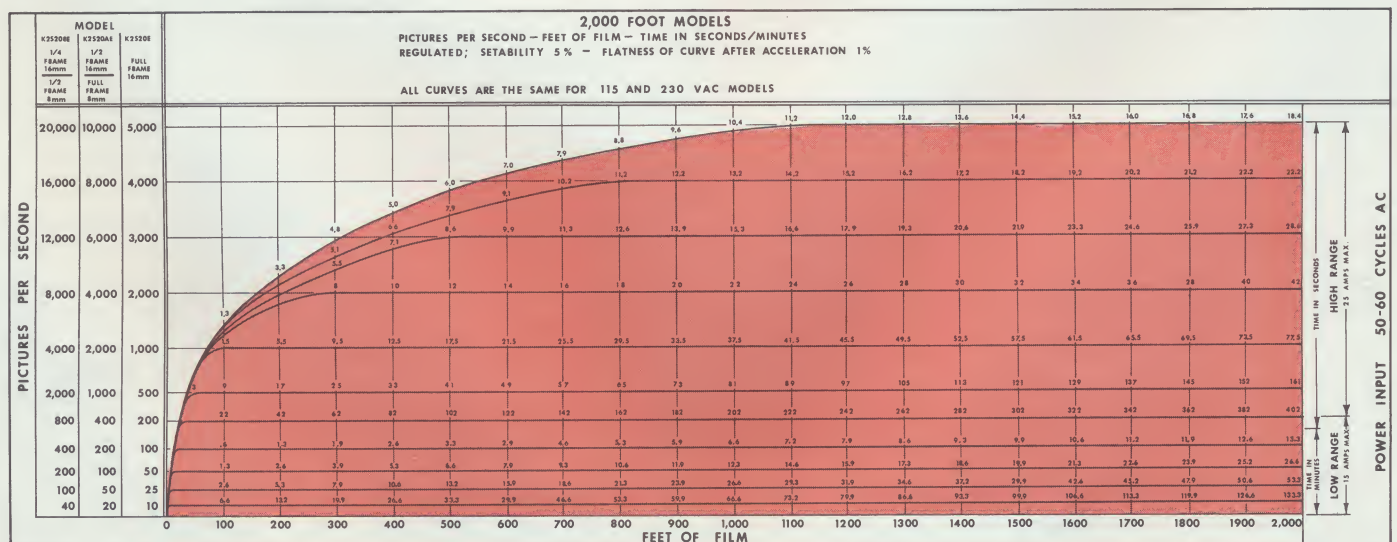
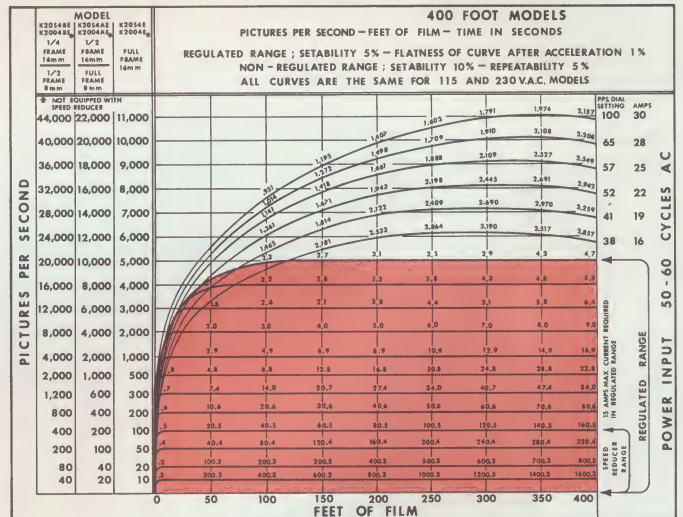
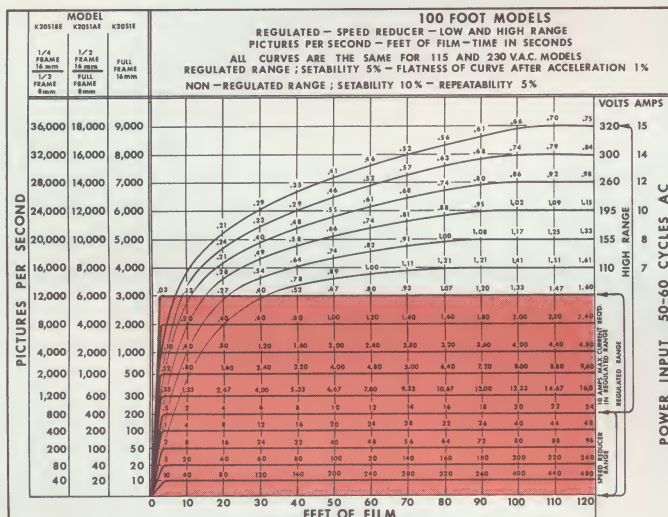
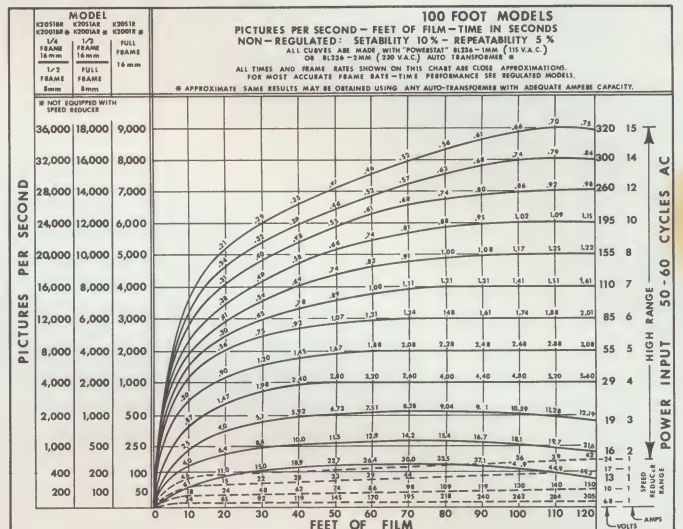
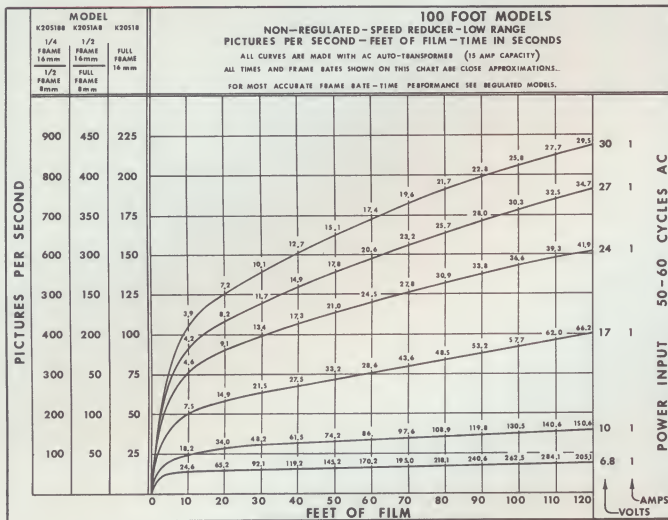
All optical heads are quickly interchangeable between all Hycam film transports.





# HYCAM

## OPERATION – Time vs Speed Curves





# HYCAM SPECIFICATIONS

## OPERATING DETAILS: 100-Ft Models

(FILM CAPACITIES BASED ON STANDARD-THICKNESS FILM)

| MODEL*  | FRAME<br>FORMAT   | PRISM<br>no. sides | SPEED RANGE<br>pps | REGULATION<br>RANGE, pps<br>(E Models only) | SPEED<br>REDUCER | SHUTTER<br>SPEED<br>MINIMUM<br>microsec | SHUTTER<br>OPENING<br>MINIMUM<br>ratio† |
|---------|-------------------|--------------------|--------------------|---------------------------------------------|------------------|-----------------------------------------|-----------------------------------------|
| K20S1R  | Full 16 mm        | 8                  | 10 - 9,000         | 10 - 3,000                                  | YES              | 1.0                                     | 1/100                                   |
| K2001R  | Full 16 mm        | 8                  | 100 - 9,000        | NOT AVAILABLE                               | NO               | 1.0                                     | 1/100                                   |
| K20S1AR | ½ 16 mm<br>8 mm   | 16                 | 20 - 18,000        | 20 - 6,000                                  | YES              | 1.0<br>0.5                              | 1/50<br>1/100                           |
| K2001AR | ½ 16 mm<br>8 mm   | 16                 | 200 - 18,000       | NOT AVAILABLE                               | NO               | 1.0<br>0.5                              | 1/50<br>1/100                           |
| K20S1BR | ¼ 16 mm<br>½ 8 mm | 32                 | 40 - 36,000        | 40 - 12,000                                 | YES              | 1.0<br>0.5                              | 1/25<br>1/50                            |
| K2001BR | ¼ 16 mm<br>½ 8 mm | 32                 | 400 - 36,000       | NOT AVAILABLE                               | NO               | 1.0<br>0.5                              | 1/25<br>1/50                            |

\*For electronic speed-regulated model, replace letter "R" with "E". R (rectifier) models require autotransformers for variable-speed operation. E (electronic) models require autotransformers for variable-speed operation above regulated range.

†Ratio of time open to time closed.

Specify 115- or 230-volt operation.

## OPERATING DETAILS: 400-Ft Models

| MODEL*  | FRAME<br>FORMAT   | PRISM<br>no. sides | SPEED RANGE<br>pps | REGULATION<br>RANGE<br>pps | SPEED<br>REDUCER | SHUTTER<br>SPEED<br>MINIMUM<br>microsec | SHUTTER<br>OPENING<br>MINIMUM<br>ratio† |
|---------|-------------------|--------------------|--------------------|----------------------------|------------------|-----------------------------------------|-----------------------------------------|
| K20S4E  | Full 16 mm        | 8                  | 5 - 11,000         | 5 - 5,000                  | YES              | 1.0                                     | 1/100                                   |
| K2004E  | Full 16 mm        | 8                  | 100 - 11,000       | 100 - 5,000                | NO               | 1.0                                     | 1/100                                   |
| K20S4AE | ½ 16 mm<br>8 mm   | 16                 | 10 - 22,000        | 10 - 10,000                | YES              | 1.0<br>0.5                              | 1/50<br>1/100                           |
| K2004AE | ½ 16 mm<br>8 mm   | 16                 | 200 - 22,000       | 200 - 10,000               | NO               | 1.0<br>0.5                              | 1/50<br>1/100                           |
| K20S4BE | ¼ 16 mm<br>½ 8 mm | 32                 | 20 - 44,000        | 20 - 20,000                | YES              | 1.0<br>0.5                              | 1/25<br>1/50                            |
| K2004BE | ¼ 16 mm<br>½ 8 mm | 32                 | 400 - 44,000       | 400 - 20,000               | NO               | 1.0<br>0.5                              | 1/25<br>1/50                            |

\*Specify 115- or 230-volt operation.

†Ratio of time open to time closed.

## OPERATING DETAILS: 2000-Ft Models

| MODEL*  | FRAME<br>FORMAT               | PRISM<br>no. sides | REGULATION<br>RANGE<br>pps | SHUTTER<br>SPEED<br>MINIMUM<br>microsec | SHUTTER<br>OPENING<br>MINIMUM<br>ratio† |
|---------|-------------------------------|--------------------|----------------------------|-----------------------------------------|-----------------------------------------|
| K2S20E  | Full 16 mm                    | 8                  | 10 - 5,000                 | 2                                       | 1/100                                   |
| K2S20AE | ½-Frame 16 mm<br>8 mm         | 16                 | 20 - 10,000                | 2<br>1                                  | 1/50<br>1/100                           |
| K2S20BE | ¼-Frame 16 mm<br>½-Frame 8 mm | 32                 | 40 - 20,000                | 2<br>1                                  | 1/25<br>1/50                            |

\*Specify 115- or 230-volt operation.

†Ratio of time open to time closed.

| DIMENSIONS     | 100-ft | 400-ft | 2,000-ft |
|----------------|--------|--------|----------|
| Height, inches | 10     | 15     | 27       |
| Width, inches  | 9      | 15     | 18       |
| Depth, inches  | 9      | 12     | 15       |
| Weight, pounds | 14     | 34     | 82       |

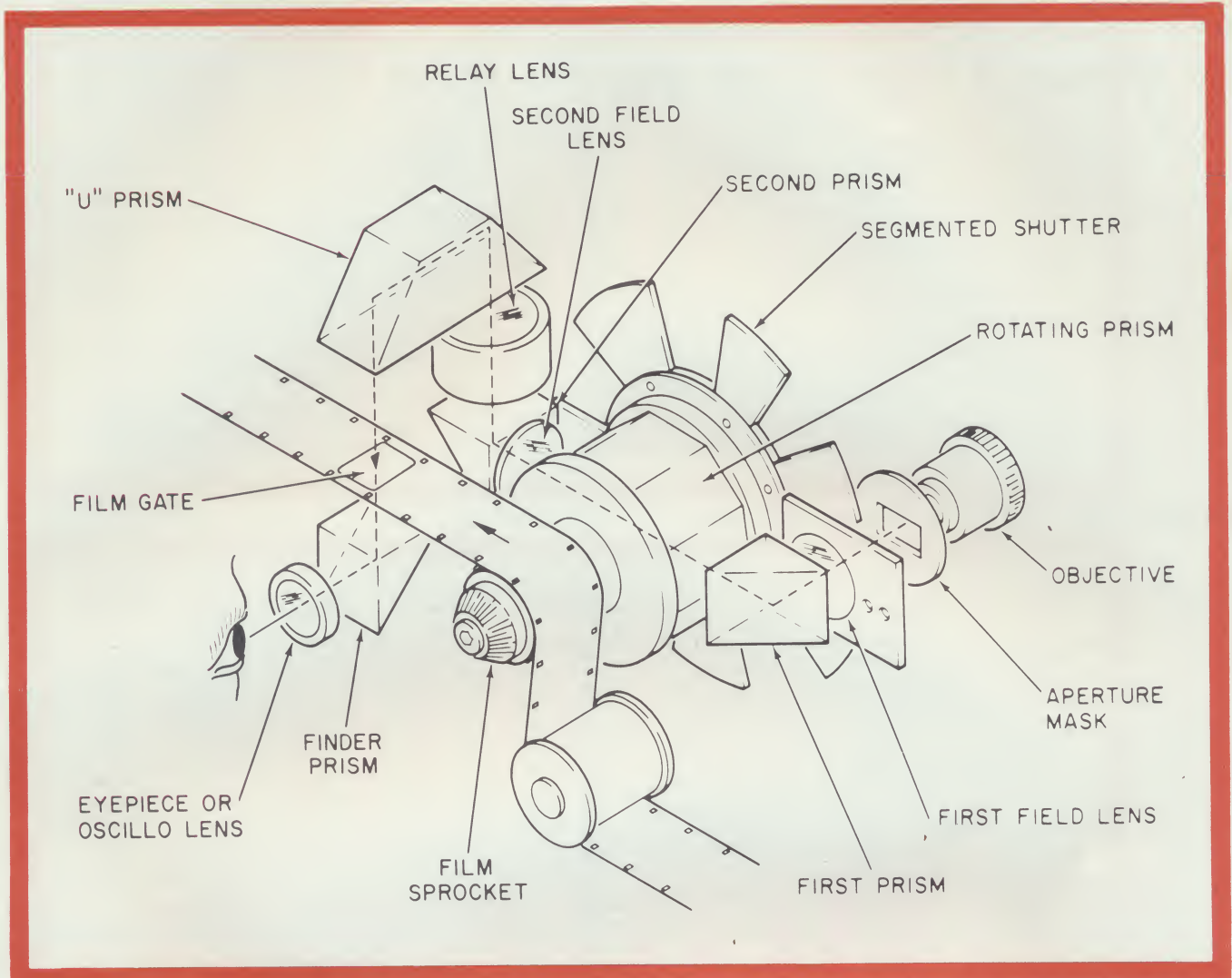
Hycam number coding indicates the following features:

Hycam Series ——— K2 00 4  
 Speed Reducer Models ———  
 00-Non speed reducer  
 0S-Speed reducer 100-  
 and 400-ft  
 S-Speed reducer 2000-ft  
 Film Capacity ———  
 1-100-ft, 4-400-ft, 20-2000-ft

A E ——— Electronic Speed Regulation  
 E-Electronic Control  
 R-Rectifier  
 (non-regulated model)  
 Frame Format  
 A-½-frame 16 mm  
 or true 8 mm  
 B-¼-frame 16 mm  
 or ½-frame 8 mm  
 Omit for Standard 16 mm



# HYCAM OPTICS



## OFFICES OR DEALERS IN PRINCIPAL CITIES

### DISTRIBUTED BY:

#### FULLY GUARANTEED

90-day guarantee: If, for any reason, you are not completely satisfied with any Red Lake product within 90 days, you may return it for full credit.

One-year warranty covers any defect in workmanship or material.

If desired, Red Lake equipment can be rented with advantageous rental credits against ultimate purchase. Ask about our 10-day free-trial plan.

## *Red Lake Laboratories, Inc.*

PHOTO INSTRUMENTATION EQUIPMENT

*Products the User Likes*

2971 CORVIN DRIVE  
KIFER INDUSTRIAL PARK  
SANTA CLARA, CALIFORNIA 95051  
TELEPHONE (408)-739-3034  
TWX 910-339-9241